



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

ESTUDO DE TRÁFEGO



EDO ROCHAS ARQUITETURA

EMPREENDIMENTO RESIDENCIAL, COMERCIAL, HOTELEIRO E SERVIÇOS



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

ÍNDICE

| | |
|---|------------|
| 1. APRESENTAÇÃO..... | 4 |
| 2. INFORMAÇÕES GERAIS DO EMPREENDIMENTO | 6 |
| 3. CARACTERIZAÇÃO DO EMPREENDIMENTO..... | 7 |
| 4. CARACTERIZAÇÃO DO ENTORNO..... | 11 |
| A. Delimitação e descrição da área de influência mediata..... | 11 |
| B. Delimitação e descrição da área de influência imediata..... | 13 |
| C. Características das vias de acessos | 13 |
| D. Seções transversais das vias | 19 |
| E. Uso e ocupação do solo no entorno do empreendimento | 32 |
| F. Pontos de parada de ônibus e taxi..... | 34 |
| G. Acessibilidade ao transporte coletivo da área de influência imediata..... | 41 |
| H. Sentidos de circulação na área de influência mediata..... | 42 |
| I. Condições da sinalização viária..... | 43 |
| J. Condições do pavimento das pistas..... | 44 |
| K. Condições do pavimento das calçadas..... | 45 |
| L. Volumetria de pedestres | 46 |
| M. Volumetria veicular atual..... | 47 |
| 5. AVALIAÇÃO DOS IMPACTOS | 57 |
| A. Situação sem o empreendimento..... | 57 |
| a. Capacidade viária e nível de Serviço atual nas principais interseções na situação sem o empreendimento ano 2016..... | 57 |
| B. Situação com o empreendimento..... | 75 |
| b. Previsão da demanda futura..... | 75 |
| c. Potencial de absorção de viagens internas do empreendimento..... | 89 |
| d. Distribuição espacial das viagens geradas e alocação no sistema viário na área de influência | 90 |
| e. Projeções..... | 105 |
| f. Nível de Serviço futuro | 105 |
| 6. RECOMENDAÇÃO DAS MEDIDAS MITIGADORAS E COMPENSATÓRIAS | 121 |
| A. Medidas operacionais de aumento de capacidade..... | 121 |
| a. Modernização dos conjuntos semaforicos | 121 |
| b. Implantação de sentido único de circulação..... | 133 |
| c. Proibição de estacionamento | 133 |
| d. Proibição de conversão à esquerda..... | 133 |
| B. Medidas estruturais de aumento de capacidade..... | 133 |
| C. Avaliação das condições de acesso e de circulação de veículos e de pedestres no entorno | 138 |

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AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | |
|--|------------|
| D. Avaliação dos impactos nos serviços de transporte coletivo na área de influência do empreendimento..... | 138 |
| E. Avaliação de ocorrência de impacto na fase de obras..... | 139 |
| 7. CONCLUSÕES | 140 |
| REFERÊNCIAS BIBLIOGRÁFICAS | 142 |

ANEXO 1 – ROTAS E FREQUENCIAS DO TRANSPORTE COLETIVO

ANEXO 2 – CONTAGENS VEICULARES

ANEXO 3 – PLANILHAS DE SIMULAÇÃO DE TRÁFEGO



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

1. APRESENTAÇÃO

A Região Metropolitana de Campinas é uma das zonas urbanas que mais crescem e recebem novos investimentos privados no Estado de São Paulo. Boa parte dos investimentos captados pelo Município é de empreendedores internacionais.

Campinas e região têm importantes vetores de desenvolvimento sustentável como a infraestrutura de rodovias e o Aeroporto Internacional de Viracopos.

No ranking da Revista Exame publicado no último mês de outubro, Campinas se posicionou como a 9ª cidade mais atrativa para se fazer negócios do Brasil. Nesta mesma pesquisa, Campinas despontou como a 1ª cidade em infraestrutura do Brasil; e o MCTI – Ministério da Ciência, Tecnologia e Inovação considerou a cidade mais inovadora do interior do Brasil. Segundo a consultoria Urban Systems, a cidade oferece a melhor infraestrutura do Brasil para os negócios.

A atividade econômica aquecida da região tem resultado no crescimento do volume de negócios do setor imobiliário, com valorização significativa no preço médio de imóveis e no surgimento de novos empreendimentos residenciais e comerciais, alguns deles de grande porte.

Os empreendedores preocupados em melhorar a qualidade de vida do entorno de seus empreendimentos têm realizado os estudos de impacto colaborando com as áreas de projeto, planejamento e engenharia de tráfego, da Prefeitura para que sejam avaliadas a situação no sistema viário adjacente e propostas soluções para mitigar eventuais impactos negativos que possam causar.

O objetivo deste trabalho é apresentar o estudo de Impacto no Tráfego do empreendimento da empresa MMG Consultoria e Assessoria Empresarial Ltda, localizado na Avenida Imperatriz Dona Tereza Cristina, 11, Jardim Guarani, Campinas, terreno do Guarani F C - Estádio Brinco de Ouro da Princesa.

O projeto do empreendimento será desenvolvido numa área de aproximadamente 83.190 metros quadrados, onde serão implantados uma série de tipologias de caráter residencial, hoteleira e comercial, totalizando 479.642 m² de área total construída.



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O presente estudo visa caracterizar o empreendimento classificado como polo gerador de tráfego quanto sua produção de viagens por modalidade de transporte, sua inserção no sistema viário e de transportes existente dentro da área de influência, sua distribuição dentro dela e adotar ações efetivas que minimizem os impactos na circulação viária causados pela implantação.

O estudo também avisa o atendimento da Legislação Municipal em seu Decreto 17.261 de 08 de fevereiro de 2011.

Os principais objetivos do presente estudo foram:

- ✚ Definir a área de influência direta do loteamento e o sistema viário principal contido nessa área;
- ✚ Através de pesquisas e dados estatísticos, caracterizar o volume veicular atual nos períodos de pico nas vias das adjacências;
- ✚ Através de pesquisas e dados estatísticos, estimar o tráfego que deverá ser gerado pelos diversos setores do Empreendimento;
- ✚ Determinar a redistribuição do tráfego futuro, considerando Tráfego Gerado, projeção do tráfego atual e implantação de novas vias externas ao empreendimento;
- ✚ Avaliar a funcionalidade e capacidade de todo o sistema viário, já considerando o impacto do Tráfego Gerado e a projeção do tráfego atual;
- ✚ Caso seja necessário, idealizar e avaliar melhorias no sistema viário atual que estabeleçam boas condições de fluidez para o tráfego da região.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

2. INFORMAÇÕES GERAIS DO EMPREENDIMENTO

Nome do empreendimento: Guarani F.C.

Endereço: Av. Imperatriz Dona Tereza Cristina, 11 - Jardim Proença - Campinas

Proprietário: MMG Consultoria e Assessoria Empresarial Ltda.

Responsável técnico: Eng. Eduardo Ribeiro Rocha

Autor do projeto de arquitetura: Eng. Eduardo Ribeiro Rocha

Técnicos responsáveis pela elaboração do estudo: Eng. Agenor Cremonese Júnior e Eng. Cintia

Aparecida Rossati Xavier

CREA: 0600436487 e 5.060.860.010/D

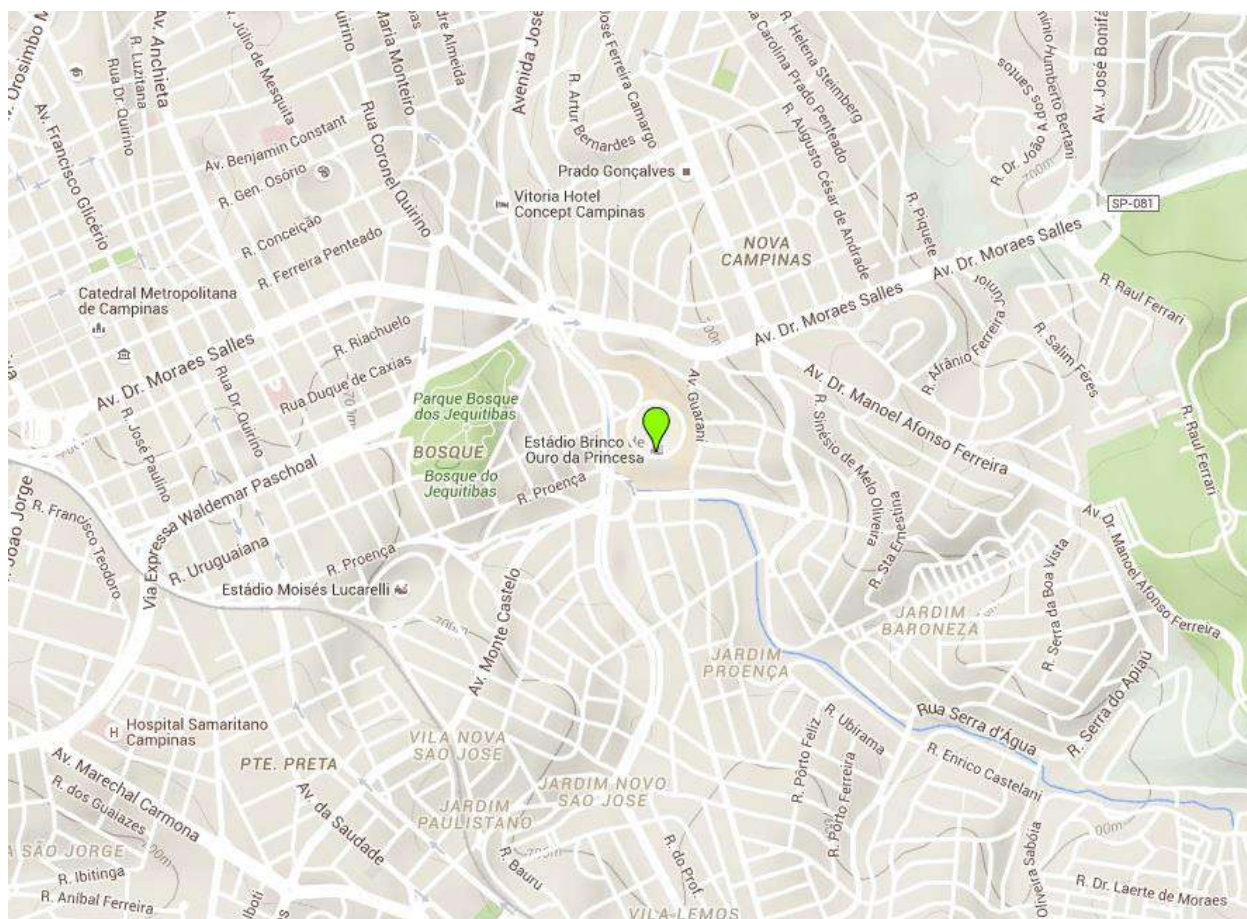


Figura 1 - Mapa de localização



3. CARACTERIZAÇÃO DO EMPREENDIMENTO

As seguintes informações foram prestadas pelo cliente para o desenvolvimento do presente estudo:

Área do terreno: 64.465,67 m²

Área computável total: 282.098 m²

Área não computável total: 221.148 m²

Estas áreas são compostas dos seguintes usos:

Shopping Center

Nº de pavimentos: 5

Área total não computável: 23.996 m²

Área total computável: 97.433 m²

Nº de vagas: 2.784

Área total de subsolos: 60.715 m²

Área construída total: 182.144 m²

Fator A.B.L.: 60%

A.B.L. : 72.857 m²

Torres de escritórios

Nº de torres: 2

Nº de pavimentos tipo: 23

Área total dos pavimentos tipo – computável/torre: 34.500 m²

Área total computável: 69.000 m²

Área construída por torre: 34.500 m²

Relação vaga / área construída: 1/60

Nº de vagas: 1.971

Área locável: 58.650 m²

Torres residenciais

Nº de torres: 6

Nº de pavimentos tipo: 28

Nº de apartamentos por pavimento: 6

Nº de apartamentos por torre: 168

Nº total de apartamentos 1.008

Nº de vagas / apartamento: 2

Nº total de vagas: 2.016

Relação área de subsolo / vaga: 30 m²



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | | |
|--|-----------------------------------|---------------------------------------|
| Terreno Geral (m²) | | 83.473,87 |
| Terreno Magnum (m ²) | | 65.433,60 |
| Área Pública (Bosque) (m ²) | | 18.040,27 |
| Tipologia | Computável (m²) | Não Computável (m²) |
| Shopping Center | 97.433 | 84.711 |
| Torres de Escritórios | 69.000 | 34.500 |
| Hotel | 26.625 | 13.313 |
| Torres Residenciais | 89.040 | 88.625 |
| Total | 282.098 | 221.148 |
| Total Construído (m²) | | 503.246 |
| Coefficiente de Aproveitamento do Projeto | | 3,4 |
| Taxa de Ocupação do Projeto | | 49,17% |
| Taxa de Permeabilidade do Projeto | | 24,05% |

| Shopping Center | |
|---|---------|
| Nº. de Pavimentos | 5 |
| Área Não Computável Shopping (m ²) | 23.996 |
| Área Computável Shopping (m ²) | 97.433 |
| Área Construída Shopping (m ²) | 121.429 |
| Nº. Total Vagas (1/60m ² A.C.) | 2.024 |
| Área Total Subsolos (Nº. Vagas x 30m ²) | 60.715 |
| Área Total Não Computável (m ²) | 84.711 |
| Área Total Computável (m ²) | 97.433 |
| Área Total Construída (m ²) | 182.144 |
| A.B.L. (60% A. Comput.) (m ²) | 72.857 |

| Torres de Escritórios | |
|---|---------|
| Nº. de Torres | 2 |
| Nº. de Pavimentos | 23 |
| Área Computável / Torre (m ²) | 34.500 |
| Área Total Computável (m ²) | 69.000 |
| Nº. Total Vagas (1/60m ² A.C.) | 1.150 |
| Área Total Subsolos (Nº. Vagas x 30m ²) | 34.500 |
| Área Total Construída (m ²) | 103.500 |
| A.B.L. (85% A. C.) (m ²) | 58.650 |

| Hotel | |
|---|--------|
| Nº. de Pavimentos | 25 |
| Nº. Chaves / Pavimento | 20 |
| Nº. Total Chaves | 500 |
| Área do Quarto (m ²) | 25 |
| Área Total Computável (m ²) | 26.625 |
| Nº. Total Vagas (1/60m ² A.C.) | 444 |
| Área Total Subsolos (Nº. Vagas x 30m ²) | 13.313 |
| Área Total Construída (m ²) | 39.938 |

| Torres Residenciais | |
|---|---------|
| Nº. de Torres | 6 |
| Nº. de Pavimentos Tipo | 28 |
| Área Total Não Computável / Torre (m ²) | 4.691 |
| Área Total Computável / Torre (m ²) | 14.840 |
| Nº. Unidades / Pavimento | 6 |
| Nº. Unidades / Torre | 168 |
| Nº. Total Unidades | 1.008 |
| Nº. Vagas / Unidade | 2 |
| Nº. Total Vagas | 2.016 |
| Área Total Subsolos (Nº. Vagas x 30m ²) | 60.480 |
| Área Total Não Computável (m ²) | 88.625 |
| Área Total Computável (m ²) | 89.040 |
| Área Total Construída (m ²) | 177.665 |

Tabela 1- quadro de áreas



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Os acessos ao empreendimento serão realizados pela Av. Guarani, Av. Princesa D'Oeste, Av. Imperatriz Dona Tereza Cristina e Rua Avelino do Amaral.

Desta forma considerou-se a limitação deste estudo de tráfego atrelada a veracidade das informações fornecidas.

Constitui ainda como limitações da elaboração deste estudo a ausência de parâmetros oficiais para projeção do volume de tráfego aferido em campo para cenários futuros e indefinições quanto a existência de projetos futuros.

Este estudo também não trata de questões referentes a fase de obras e seu impacto no sistema viário. Questões relacionadas a microacessibilidade dos projetos, entendida como as soluções de circulação de veículos e pedestres internas ao empreendimento, não serão tratadas por entender que estes detalhes não interferem na presunção da viabilidade técnica dos projetos em termos de interferência no sistema viário e de transportes do entorno, objetivo principal deste estudo.

Data prevista para o início da operação: 2022



4. CARACTERIZAÇÃO DO ENTORNO

A. Delimitação e descrição da área de influência mediata

A determinação da área de influência seguiu a classificação estabelecida pela Lei Municipal nº 8.232/94 quanto ao tipo de polo gerador de tráfego, sendo que este está classificado como polo tipo P3 e sua área de influência possui raio de 2,5 km a partir dos limites do empreendimento;

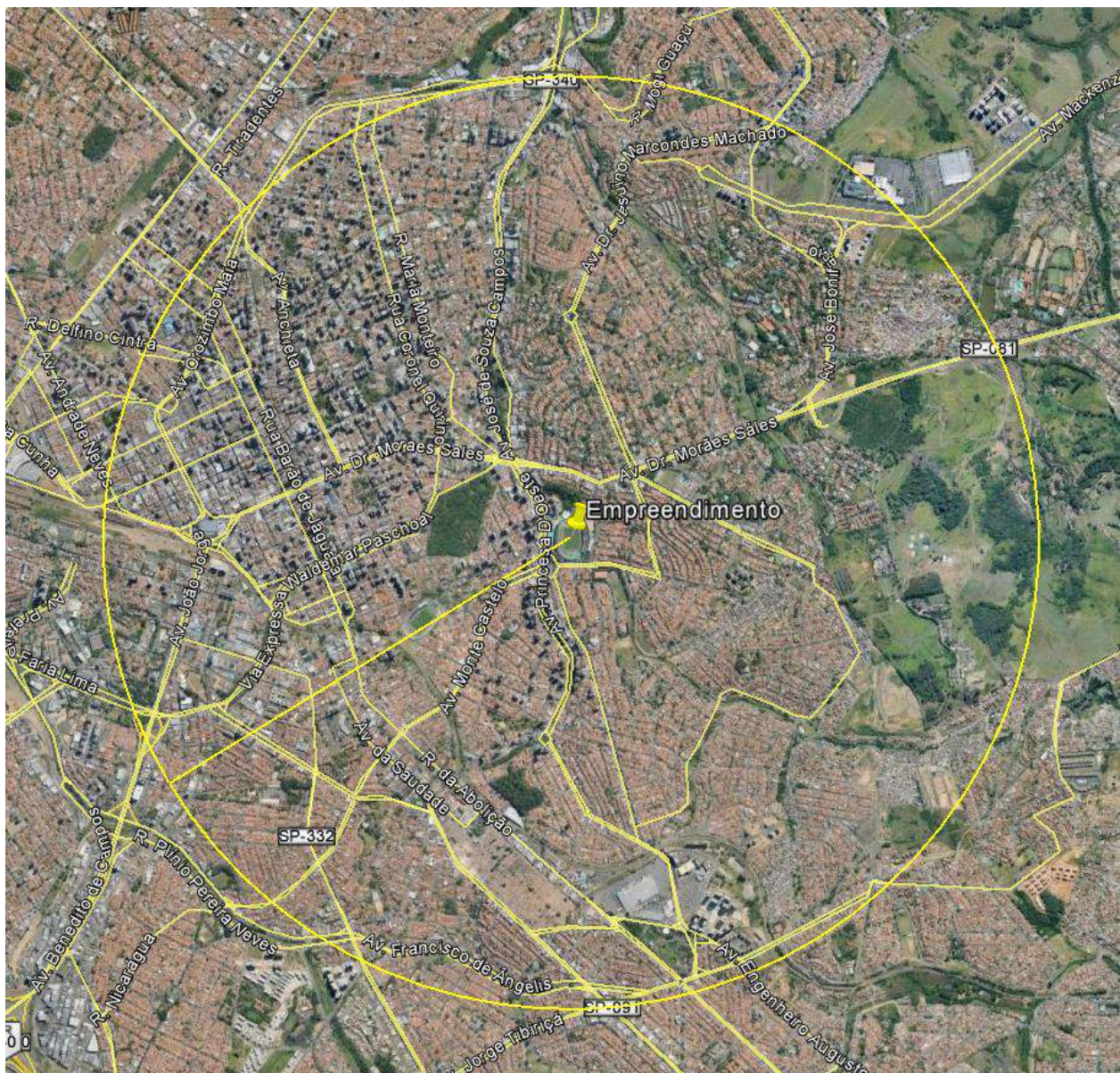


Figura 3 - Área de influência mediata

Descrição das vias estruturais e vias de acesso ao sistema estrutural

Corredor Norte Sul:



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Av. José de Souza Campos, Av. Princesa D'Oeste, Av. Dr. Antônio Carlos Salles Júnior e Av. Comendador Enzo Ferrari.

Corredor Leste Oeste:

Av. Dr. Moraes Salles e Av. 20 de novembro

As vias estruturais são: Via Expressa Waldemar Paschoal, Rua Ministro João Batista Martins Ladeira, Av. João Jorge, Av. Senador Saraiva, Av. Orosimbo Maia.

Vias coletoras: Av. Dr. Ângelo Simões, Av. Monte Castelo, Av. Ayrton Senna da Silva, Rua Conde D'Eu, Av. Imperatriz Dona Tereza Cristina, Av. Cláudio Celestino Toledo Soares, Rua Irmã Serafina, Av. Dr. Jesuíno Marcondes Machado, Av. Dr. Manoel Afonso Ferreira.

Planta, em escala 1:10.000, com a área de influência prevista para o empreendimento e indicação do sistema viário de acesso ao sistema estrutural de vias do município.

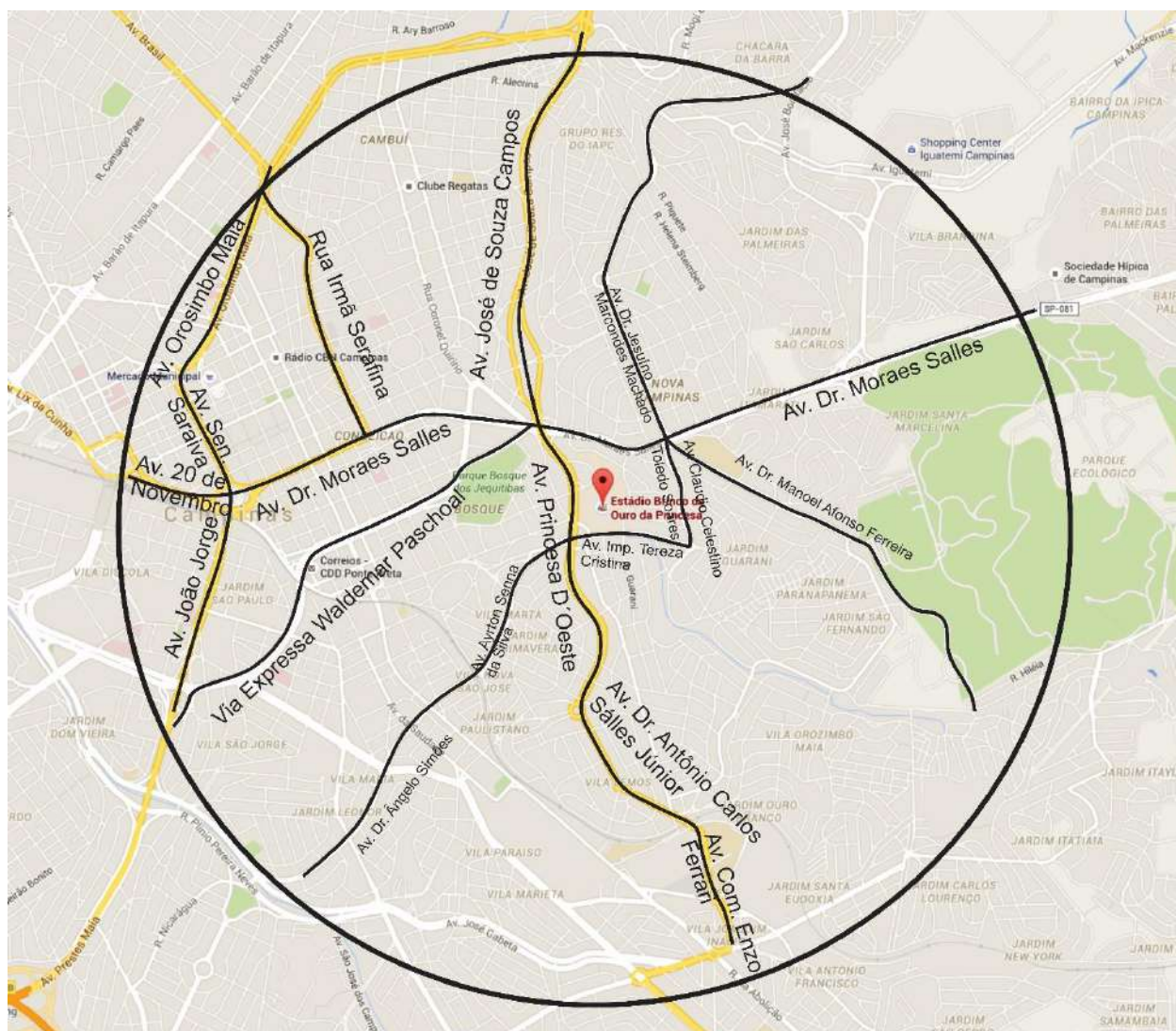


Figura 4 - Área de influência mediata - principais vias



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

B. Delimitação e descrição da área de influência imediata

Das vias citadas acima, as seguintes vias possuem impacto direto da implantação do empreendimento:

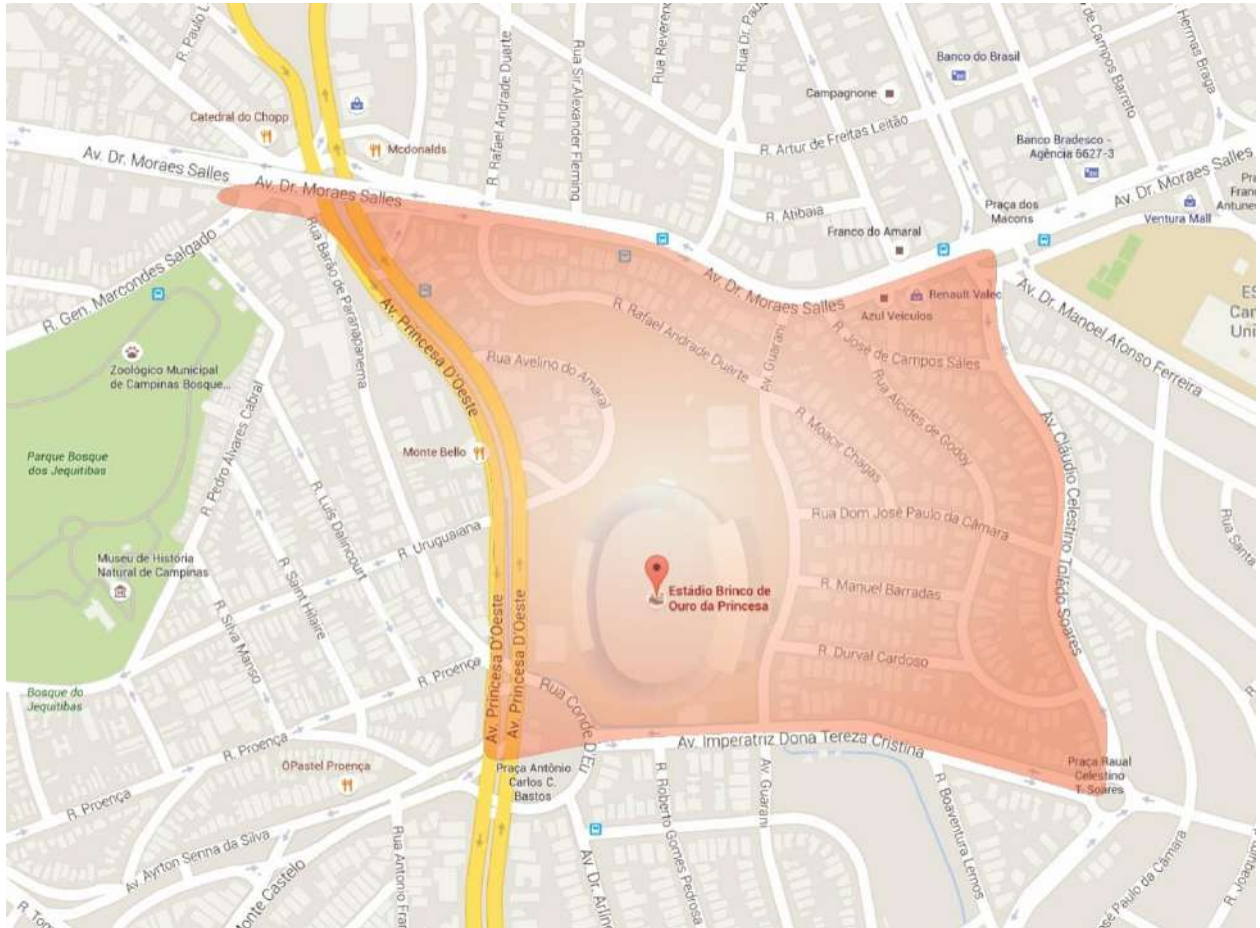


Figura 5 - Área de influência imediata

Av. Princesa D'Oeste, Rua Conde D'Eu Av. Imperatriz Dona Tereza Cristina, Av. Guarani, Av. Cláudio Celestino Toledo Soares, Av. Ayrton Senna da Silva, Rua Me. Maria Santa Margarida, Av. Dr. Jesuíno Marcondes Machado, Av. Dr. Moraes Salles, Av. José de Souza Campos, Rua General Marcondes Salgado, Rua Barão de Paranapanema, Rua Avelino do Amaral.

Planta em escala 1:2000, com a indicação do sistema viário do entorno do empreendimento;

C. Características das vias de acessos

Foi realizada vistoria em 06 de março de 2016, afim de obtenção das principais características das vias contidas na área de influência imediata. Abaixo o memorial fotográfico:



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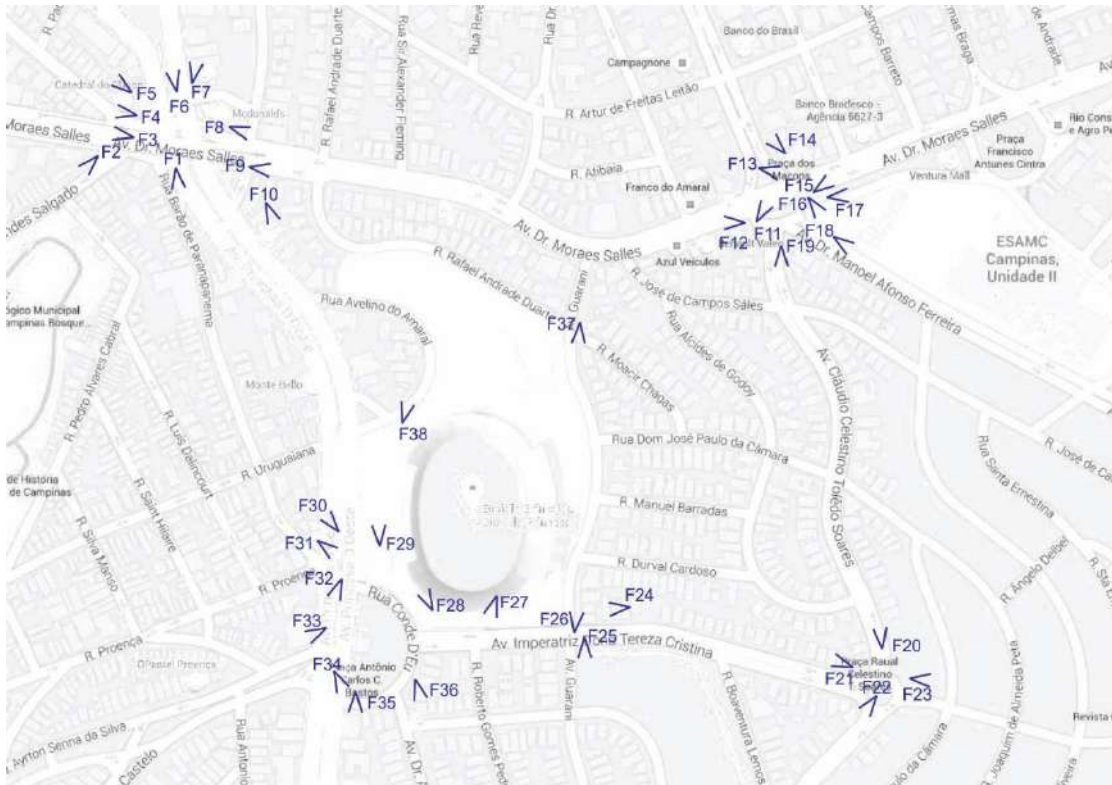


Figura 6 - Visada das fotos



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Figura 7 - foto 1



Figura 8 - foto 2



Figura 9 - foto 3



Figura 10 - foto 4



Figura 11 - foto 5



Figura 12 - foto 6



Figura 13 - foto 7



Figura 14 - foto 8



Figura 15 - foto 9



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Figura 16- foto 10



Figura 17 - foto 11



Figura 18 - foto 12



Figura 19 - foto 13



Figura 20 - foto 14



Figura 21 - foto 15



Figura 22 - foto 16



Figura 23- foto 17



Figura 24 - foto 18



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Figura 25 - foto 19



Figura 26 - foto 20



Figura 27 - foto 21



Figura 28 - foto 22



Figura 29 - foto 23



Figura 30 - foto 24



Figura 31 - foto 25



Figura 32 - foto 26



Figura 33 - foto 27



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Figura 34 - foto 28



Figura 35 - foto 29



Figura 36 - foto 30



Figura 37 - foto 31



Figura 38 - foto 32



Figura 39 - foto 33



Figura 40 - foto 34



Figura 41 - foto 35



Figura 42 - foto 36



Figura 43 - foto 37



Figura 44 - foto 38

D. Seções transversais das vias

Segue abaixo a seção das vias no principal cruzamento da área de influência imediata.

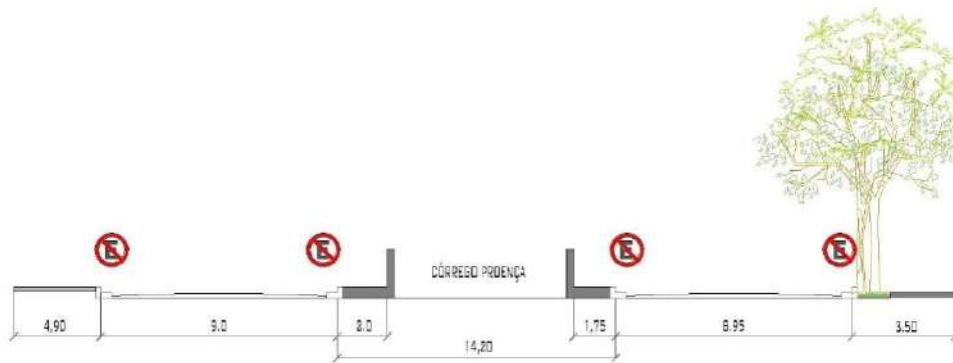


Figura 45 - localização das seções das vias



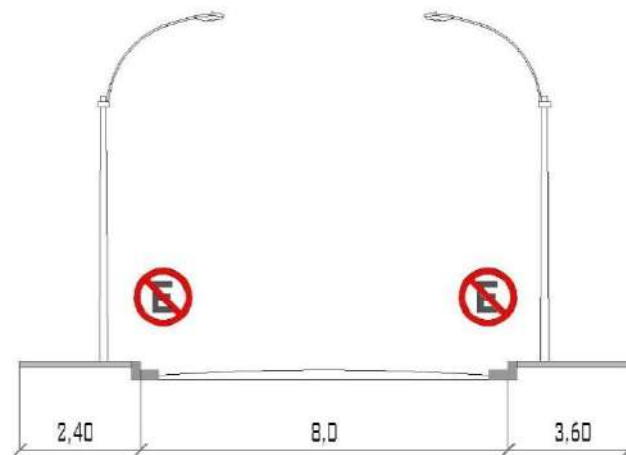
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AV. PRINCESA D'OESTE - SEÇÃO A
CAMPINAS - SP

Figura 46 - Av. Princesa D'Oeste - seção A



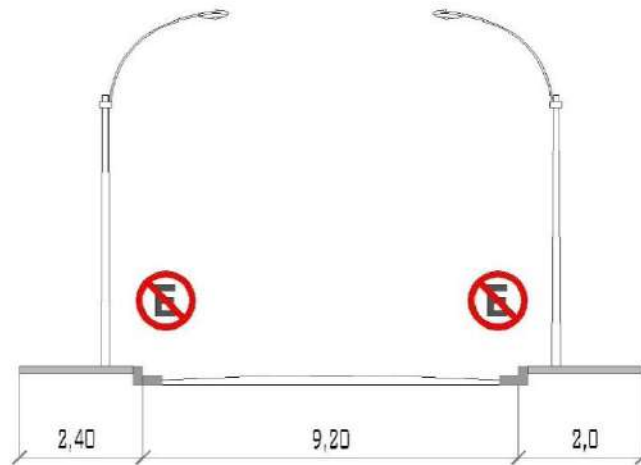
RUA BARÃO DE PARANAPANEMA - SEÇÃO B
CAMPINAS - SP

Figura 47 - Rua Barão de Paranapanema - seção B



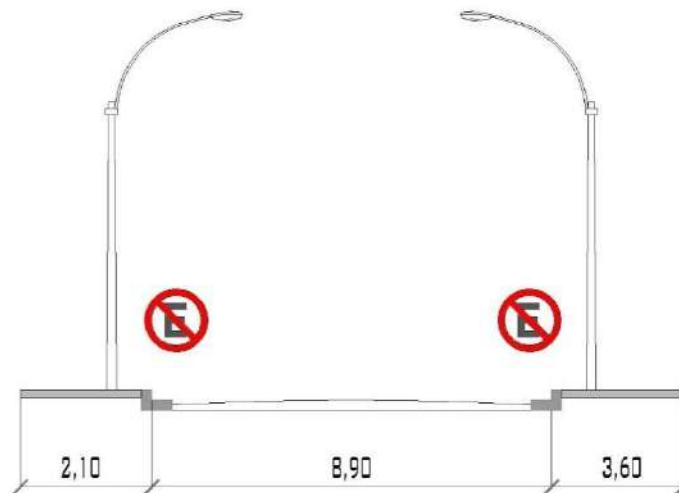
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RUA GENERAL MARCONDES SALGADO - SEÇÃO C
CAMPINAS - SP

Figura 48 - Rua General Marcondes Salgado - seção C



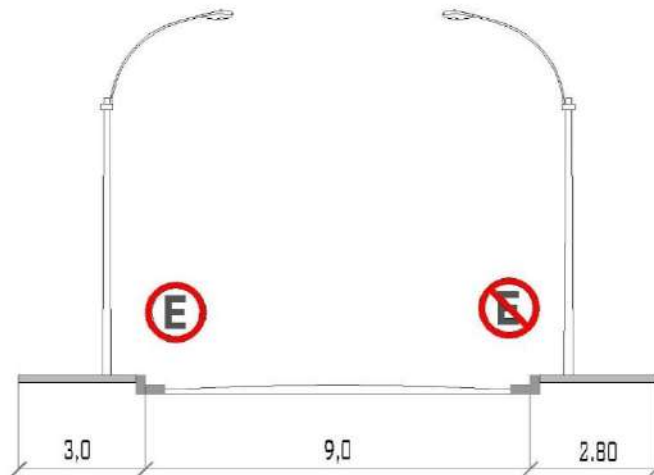
AV. DR. MORAES SALLES - SEÇÃO D
CAMPINAS - SP

Figura 49 - Av. Dr. Moraes Salles - seção D



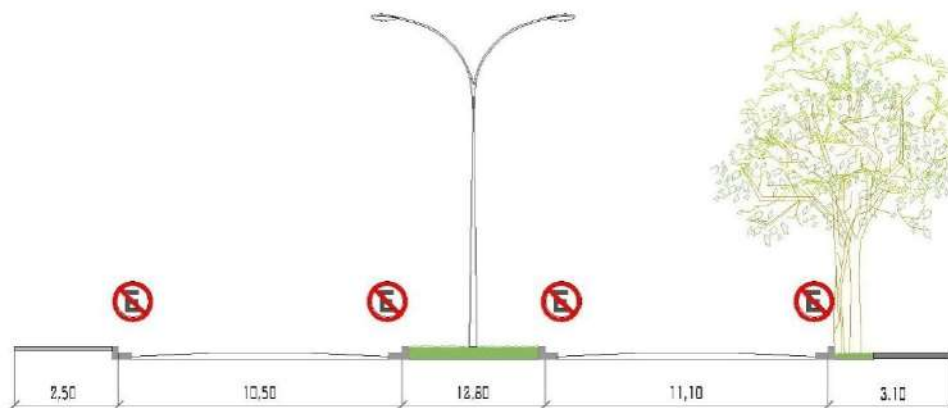
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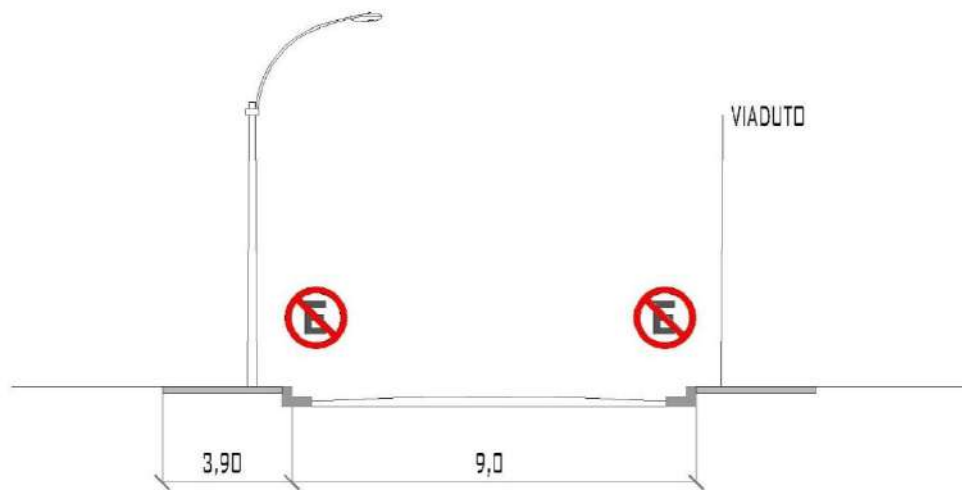
RUA CORONEL FRANCISCO ANDRADE COUTINHO - SEÇÃO E
CAMPINAS - SP

Figura 50 - Rua Coronel Francisco Andrade Coutinho - seção E



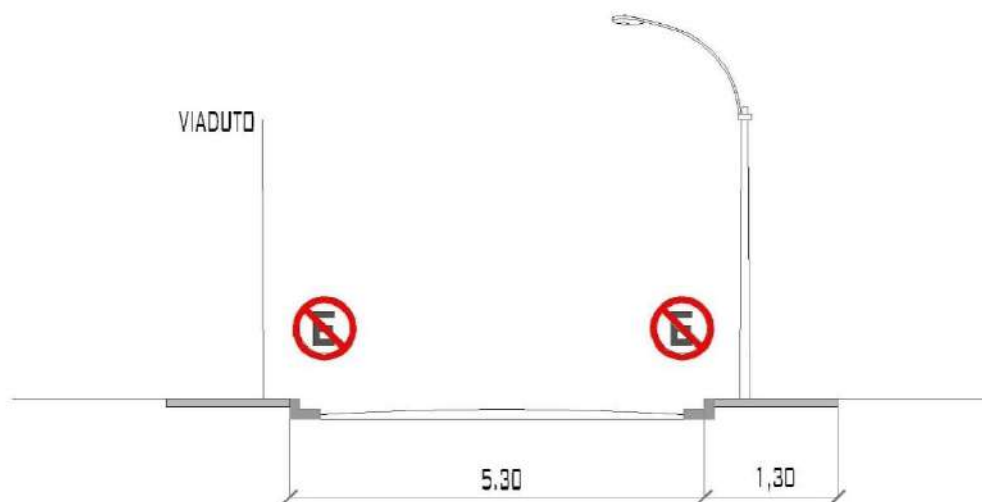
AV. JOSÉ DE SOUZA CAMPOS - SEÇÃO F
CAMPINAS - SP

Figura 51 - Av. José de Souza Campos - seção F



AV. DR. MORAES SALLES - SEÇÃO G
CAMPINAS - SP

Figura 52 - Av. Dr. Moraes Salles - seção G



AV. DR. MORAES SALLES - SEÇÃO H
CAMPINAS - SP

Figura 53 - Av. Dr. Moraes Salles - seção H

Além da seção das vias, obteve-se também componentes estratégicos vinculados a mobilidade sustentável, visando estabelecer um processo de avaliação das condições dos seguintes componentes:

- Calçada
- Pavimento das Vias
- Poluição Visual
- Poluição Sonora



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- e. Classificação das Vias de Tráfego
- f. Tráfego de Veículos
- g. Semáforos
- h. Sistema de Transporte
- i. Uso do Solo
- j. Mobiliário Urbano
- k. Circulação de Pedestres
- l. Faixas de Travessia
- m. Estacionamento Especial



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| | | |
|--|--|--|
| Local: Av. Princesa D'Oeste | | |
| Trecho: seção A | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| B | estado de conservação | tampas de inspeção |
| | sem pavimento | X floreiras |
| X | ondulações | X faixas com vegetação |
| X | buracos e falhas | boa drenagem |
| | plana | X favorece acúmulo de água |
| | pouca inclinação | X faixa para mobiliários |
| | íngreme | X faixa livre para pedestres |
| | obstáculos originados por rampas de acesso aos lotes | X guia rebaixada para deficientes |
| | superfície anti-derrapante | X área de visibilidade nas esquinas |
| | superfície lisa | bocas de lobo |
| X | piso tátil | postes e colunas interferindo na circulação |
| X | grelhas de exaustão com vãos de até 1,5cm | |
| 2- Pavimento das vias | | |
| | sem pavimento | trincas |
| B | estado de conservação | acive |
| X | ondulações | declive |
| | buracos e falhas | X plano |
| 3- Poluição visual | | |
| | faixas em postes e fachadas | vendedores ambulantes |
| | papéis colados em postes e paredes | obstáculos nas calçadas |
| | pixações | X outdoors |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | X buzinas |
| | médio nível de ruído | X motores de veículos |
| X | alto nível de ruído | carros de som e propagandas |
| | aviões e helicópteros | obras |
| 5- Classificação das vias de tráfego | | |
| | expressa | coletora |
| X | arterial | local |
| 6- Tráfego de veículos | | |
| | não há | X lentidão do tráfego em horário de pico |
| X | alto volume de tráfego | X excesso de velocidade |
| | médio volume de tráfego | veículos estacionados em local não permitido |
| | baixo volume de tráfego | |
| 7- Semáforos | | |
| B | estado de conservação | semáforos com contagem de tempo para pedestres |
| | semáforos com contagem de tempo | radares de velocidade |
| X | semáforos para pedestres | radares de avanço de semáforo |
| 8- Sistema de transportes | | |
| X | automóvel | X moto |
| X | ônibus | X bicicleta |
| X | caminhões | outros |
| 9- Uso do Solo | | |
| | residencial | residencial |
| | comercial | industrial |
| X | misto | institucional |
| 10- Mobiliário Urbano | | |
| | não há | X postes com fiação |
| | banca de jornal | X postes com iluminação |
| | banca de flores | fiação subterrânea |
| | caixa de correio | ciclovia |
| X | orelhão | X painéis de pedestres |
| | orelhão adaptado | ponto de ônibus |
| | lixeira | ponto de ônibus adaptado |
| | bancos | X espaço de socialização |
| | indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | | |
| | não há | X crianças |
| | baixo | X adultos |
| X | moderado | X idosos |
| | intenso | pessoas em cadeira de roda |
| X | estudantes | deficientes visuais |
| X | trabalhadores | deficientes auditivos |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | X curta espera para travessia |
| | difícil percepção da travessia | longa espera para travessia |
| | travessia elevada | X guia rebaixada junto à faixa de pedestres |
| | iluminação | X caminho para a travessia sem barreiras |
| | iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| X | guias rebaixadas alinhadas entre si nos lados opostos da via | X guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | | |
| X | não há | está localizado próximo ao acesso do pólo gerador de atração |
| | possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| | dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 2 - Av. Princesa D'Oeste - seção A



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | | |
|--|--|--|
| Local: Rua Barão de Paranapanema | | |
| Trecho: seção B | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| R | estado de conservação | tampas de inspeção |
| | sem pavimento | floreiras |
| | ondulações | X faixas com vegetação |
| | buracos e falhas | boa drenagem |
| X | plana | X favorece acúmulo de água |
| | pouca inclinação | X faixa para mobiliários |
| | íngreme | X faixa livre para pedestres |
| X | obstáculos originados por rampas de acesso aos lotes | X guia rebaixada para deficientes |
| | superfície anti-derrapante | X área de visibilidade nas esquinas |
| | superfície lisa | bocas de lobo |
| | piso tátil | postes e colunas interferindo na circulação |
| | grelhas de exaustão com vãos de até 1,5cm | |
| 2- Pavimento das vias | | |
| | sem pavimento | trincas |
| B | estado de conservação | áclive |
| | ondulações | declive |
| | buracos e falhas | X plano |
| 3- Poluição visual | | |
| X | faixas em postes e fachadas | vendedores ambulantes |
| | papéis colados em postes e paredes | obstáculos nas calçadas |
| | placações | outdoors |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | buzinas |
| X | médio nível de ruído | motores de veículos |
| | alto nível de ruído | carros de som e propagandas |
| | aviões e helicópteros | obras |
| 5- Classificação das vias de tráfego | | |
| | expressa | X coletora |
| | arterial | local |
| 6- Tráfego de veículos | | |
| | não há | lentidão do tráfego em horário de pico |
| | alto volume de tráfego | excesso de velocidade |
| X | médio volume de tráfego | veículos estacionados em local não permitido |
| | baixo volume de tráfego | |
| 7- Semáforos | | |
| | estado de conservação | semáforos com contagem de tempo para pedestres |
| | semáforos com contagem de tempo | radares de velocidade |
| | semáforos para pedestres | radares de avanço de semáforo |
| 8- Sistema de transportes | | |
| X | automóvel | X moto |
| | ônibus | bicicleta |
| | caminhões | outros |
| 9- Uso do Solo | | |
| | residencial | residencial |
| X | comercial | industrial |
| | misto | institucional |
| 10- Mobiliário Urbano | | |
| | não há | postes com fiação |
| | banca de jornal | postes com iluminação |
| | banca de flores | fiação subterrânea |
| | caixa de correio | ciclovia |
| | orelhão | painéis de pedestres |
| | orelhão adaptado | ponto de ônibus |
| X | lixeira | ponto de ônibus adaptado |
| X | bancos | espaço de socialização |
| | indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | | |
| | não há | X crianças |
| | baixo | X adultos |
| X | moderado | X idosos |
| | intenso | idosos em cadeira de roda |
| X | estudantes | deficientes visuais |
| X | trabalhadores | deficientes auditivos |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | X curta espera para travessia |
| | difícil percepção da travessia | longa espera para travessia |
| | travessia elevada | guia rebaixada junto à faixa de pedestres |
| | iluminação | caminho para a travessia sem barreiras |
| | iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| | guias rebaixadas alinhadas entre si nos lados opostos da via | guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | | |
| X | não há | está localizado próximo ao acesso do pólo gerador de atração |
| | possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| | dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 3 - Rua Barão de Paranapanema - seção B



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | |
|--|--|
| Local: Rua General Marcondes Salgado | |
| Trecho: seção C | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | |
| estado de conservação | tampas de inspeção |
| sem pavimento | X floreiras |
| X ondulações | faixas com vegetação |
| X buracos e falhas | X boa drenagem |
| plana | favorece acúmulo de água |
| pouca inclinação | faixa para mobiliários |
| X íngreme | faixa livre para pedestres |
| X obstáculos originados por rampas de acesso aos lotes | guia rebaixada para deficientes |
| superfície anti-derrapante | X área de visibilidade nas esquinas |
| superfície lisa | bocas de lobo |
| piso tátil | postes e colunas interferindo na circulação |
| grelhas de exaustão com vãos de até 1,5cm | |
| 2- Pavimento das vias | |
| sem pavimento | trincas |
| B estado de conservação | áclive |
| X ondulações | X declive |
| X buracos e falhas | plano |
| 3- Poluição visual | |
| faixas em postes e fachadas | vendedores ambulantes |
| papéis colados em postes e paredes | obstáculos nas calçadas |
| placações | outdoors |
| painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | |
| baixo nível de ruído | X buzinas |
| médio nível de ruído | X motores de veículos |
| X alto nível de ruído | carros de som e propagandas |
| aviões e helicópteros | X obras |
| 5- Classificação das vias de tráfego | |
| expressa | coletora |
| X arterial | local |
| 6- Tráfego de veículos | |
| não há | X lentidão do tráfego em horário de pico |
| X alto volume de tráfego | excesso de velocidade |
| médio volume de tráfego | veículos estacionados em local não permitido |
| baixo volume de tráfego | |
| 7- Semáforos | |
| B estado de conservação | semáforos com contagem de tempo para pedestres |
| semáforos com contagem de tempo | radares de velocidade |
| X semáforos para pedestres | radares de avanço de semáforo |
| 8- Sistema de transportes | |
| X automóvel | X moto |
| X ônibus | bicicleta |
| X caminhões | outros |
| 9- Uso do Solo | |
| residencial | residencial |
| comercial | industrial |
| X misto | institucional |
| 10- Mobiliário Urbano | |
| não há | X postes com fiação |
| X banca de jornal | X postes com iluminação |
| banca de flores | fiação subterrânea |
| caixa de correio | ciclovia |
| X orelhão | painéis de pedestres |
| orelhão adaptado | ponto de ônibus |
| lixeira | ponto de ônibus adaptado |
| bancos | espaço de sociabilização |
| indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | |
| não há | X crianças |
| baixo | X adultos |
| moderado | X idosos |
| X intenso | peçoas em cadeira de roda |
| X estudantes | deficientes visuais |
| X trabalhadores | deficientes auditivos |
| turistas | |
| 12- Faixa de travessia | |
| X fácil percepção da travessia | X curta espera para travessia |
| difícil percepção da travessia | longa espera para travessia |
| travessia elevada | guia rebaixada junto à faixa de pedestres |
| iluminação | X caminho para a travessia sem barreiras |
| iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| X guias rebaixadas alinhadas entre si nos lados opostos da via | X guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | |
| X não há | está localizado próximo ao acesso do pólo gerador de atração |
| possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 4 - Rua General Marcondes Salgado - seção C



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | | |
|--|--|--|
| Local: Av. Dr. Moraes Salles | | |
| Trecho: seção D | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| B | estado de conservação | tampas de inspeção |
| | sem pavimento | florais |
| | ondulações | faixas com vegetação |
| | buracos e falhas | boa drenagem |
| | plana | favorece acúmulo de água |
| X | pouca inclinação | faixa para mobiliários |
| | íngreme | faixa livre para pedestres |
| | obstáculos originados por rampas de acesso aos lotes | X guia rebaixada para deficientes |
| | superfície anti-derrapante | área de visibilidade nas esquinas |
| | superfície lisa | bocas de lobo |
| | piso tátil | X postes e colunas interferindo na circulação |
| | grelhas de exaustão com vãos de até 1,5cm | |
| 2- Pavimento das vias | | |
| | sem pavimento | trincas |
| B | estado de conservação | áclive |
| X | ondulações | X declive |
| | buracos e falhas | plano |
| 3- Poluição visual | | |
| | faixas em postes e fachadas | vendedores ambulantes |
| | papéis colados em postes e paredes | obstáculos nas calçadas |
| | placações | outdoors |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | X buzinas |
| | médio nível de ruído | X motores de veículos |
| X | alto nível de ruído | carros de som e propagandas |
| | aviões e helicópteros | obras |
| 5- Classificação das vias de tráfego | | |
| | expressa | X coletora |
| | arterial | local |
| 6- Tráfego de veículos | | |
| | não há | lentidão do tráfego em horário de pico |
| X | alto volume de tráfego | excesso de velocidade |
| | médio volume de tráfego | veículos estacionados em local não permitido |
| | baixo volume de tráfego | |
| 7- Semáforos | | |
| B | estado de conservação | semáforos com contagem de tempo para pedestres |
| | semáforos com contagem de tempo | radares de velocidade |
| X | semáforos para pedestres | radares de avanço de semáforo |
| 8- Sistema de transportes | | |
| X | automóvel | X moto |
| X | ônibus | bicicleta |
| X | caminhões | outros |
| 9- Uso do Solo | | |
| | residencial | residencial |
| X | comercial | industrial |
| | misto | institucional |
| 10- Mobiliário Urbano | | |
| X | não há | X postes com fiação |
| | banca de jornal | X postes com iluminação |
| | banca de flores | fiação subterrânea |
| | caixa de correio | ciclovia |
| | orelhão | painéis de pedestres |
| | orelhão adaptado | ponto de ônibus |
| | lixeira | ponto de ônibus adaptado |
| | bancos | espaço de sociabilização |
| | indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | | |
| | não há | crianças |
| | baixo | X adultos |
| X | moderado | idosos |
| | intenso | idosos em cadeira de roda |
| X | estudantes | deficientes visuais |
| X | trabalhadores | deficientes auditivos |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | X curta espera para travessia |
| | difícil percepção da travessia | longa espera para travessia |
| | travessia elevada | X guia rebaixada junto à faixa de pedestres |
| | iluminação | X caminho para a travessia sem barreiras |
| | iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| X | guias rebaixadas alinhadas entre si nos lados opostos da via | X guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | | |
| X | não há | está localizado próximo ao acesso do pólo gerador de atração |
| | possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| | dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 5 - Av. Dr. Moraes Salles - seção D



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | | |
|--|--|---|
| Local: Rua Dr. Coronel Francisco Andrade Coutinho | | |
| Trecho: seção E | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| M | estado de conservação (LADO ESQUERDO) | X |
| | sem pavimento | X |
| X | ondulações | X |
| X | buracos e falhas | X |
| | plana | |
| | pouca inclinação | |
| X | íngreme | |
| X | obstáculos originados por rampas de acesso aos lotes | |
| | superfície anti-derrapante | |
| | superfície lisa | |
| | piso tátil | |
| | grelhas de exaustão com vãos de até 1,5cm | X |
| 2- Pavimento das vias | | |
| | sem pavimento | |
| R | estado de conservação | X |
| | ondulações | |
| | buracos e falhas | |
| 3- Poluição visual | | |
| | faixas em postes e fachadas | |
| | papéis colados em postes e paredes | X |
| | placações | |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | |
| X | médio nível de ruído | X |
| | alto nível de ruído | |
| | aviões e helicópteros | |
| 5- Classificação das vias de tráfego | | |
| | expressa | X |
| | arterial | |
| 6- Tráfego de veículos | | |
| | não há | |
| | alto volume de tráfego | |
| | médio volume de tráfego | |
| X | baixo volume de tráfego | |
| 7- Semáforos | | |
| | estado de conservação | |
| | semáforos com contagem de tempo | |
| | semáforos para pedestres | |
| 8- Sistema de transportes | | |
| X | automóvel | X |
| | ônibus | |
| | caminhões | |
| 9- Uso do Solo | | |
| | residencial | |
| X | comercial | |
| | misto | |
| 10- Mobiliário Urbano | | |
| | não há | X |
| | banca de jornal | X |
| | banca de flores | |
| | caixa de correio | |
| | orelhão | |
| | orelhão adaptado | |
| | lixeira | |
| | bancos | |
| | indicações em braille em equipamentos | |
| 11- Circulação de pedestres | | |
| | não há | |
| | baixo | |
| X | moderado | |
| | intenso | |
| | estudantes | |
| | trabalhadores | |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | X |
| | difícil percepção da travessia | |
| | travessia elevada | |
| | iluminação | |
| | iluminação de faixa de pedestres | |
| | guias rebaixadas alinhadas entre si nos lados opostos da via | |
| 13- Estacionamento especial | | |
| X | não há | |
| | possui rebaixamento de guia | |
| | dimensões 2,30x 5,50m | |

Tabela 6 - Rua Coronel Francisco Andrade Coutinho - seção E



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | | |
|--|--|--|
| Local: Av. José de Souza Campos | | |
| Trecho: seção F | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| B | estado de conservação | tampas de inspeção |
| | sem pavimento | floreiras |
| | ondulações | faixas com vegetação |
| | buracos e falhas | X boa drenagem |
| X | plana | favorece acúmulo de água |
| | pouca inclinação | faixa para mobiliários |
| | íngreme | X faixa livre para pedestres |
| | obstáculos originados por rampas de acesso aos lotes | X guia rebaixada para deficientes |
| | superfície anti-derrapante | área de visibilidade nas esquinas |
| | superfície lisa | bocas de lobo |
| | piso tátil | postes e colunas interferindo na circulação |
| | grelhas de exaustão com vãos de até 1,5cm | |
| 2- Pavimento das vias | | |
| | sem pavimento | trincas |
| B | estado de conservação | áclive |
| X | ondulações | declive |
| | buracos e falhas | plano |
| 3- Poluição visual | | |
| | faixas em postes e fachadas | vendedores ambulantes |
| | papéis colados em postes e paredes | obstáculos nas calçadas |
| | placações | outdoors |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | X buzinas |
| | médio nível de ruído | X motores de veículos |
| X | alto nível de ruído | carros de som e propagandas |
| | aviões e helicópteros | obras |
| 5- Classificação das vias de tráfego | | |
| | expressa | coletora |
| X | arterial | local |
| 6- Tráfego de veículos | | |
| | não há | lentidão do tráfego em horário de pico |
| X | alto volume de tráfego | excesso de velocidade |
| | médio volume de tráfego | veículos estacionados em local não permitido |
| | baixo volume de tráfego | |
| 7- Semáforos | | |
| B | estado de conservação | semáforos com contagem de tempo para pedestres |
| | semáforos com contagem de tempo | X radares de velocidade |
| X | semáforos para pedestres | X radares de avanço de semáforo |
| 8- Sistema de transportes | | |
| X | automóvel | X moto |
| X | ônibus | X bicicleta |
| X | caminhões | outros |
| 9- Uso do Solo | | |
| | residencial | residencial |
| X | comercial | industrial |
| | misto | institucional |
| 10- Mobiliário Urbano | | |
| X | não há | postes com fiação |
| | banca de jornal | postes com iluminação |
| | banca de flores | fiação subterrânea |
| | caixa de correio | ciclovia |
| | orelhão | painéis de pedestres |
| | orelhão adaptado | ponto de ônibus |
| | lixeira | ponto de ônibus adaptado |
| | bancos | espaço de sociabilização |
| | indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | | |
| | não há | crianças |
| | baixo | adultos |
| X | moderado | idosos |
| | intenso | idosos em cadeira de roda |
| | estudantes | deficientes visuais |
| | trabalhadores | deficientes auditivos |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | curta espera para travessia |
| | difícil percepção da travessia | longa espera para travessia |
| | travessia elevada | guia rebaixada junto à faixa de pedestres |
| | iluminação | X caminho para a travessia sem barreiras |
| | iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| | guias rebaixadas alinhadas entre si nos lados opostos da via | guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | | |
| X | não há | está localizado próximo ao acesso do pólo gerador de atração |
| | possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| | dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 7 - Av. José de Souza Campos - seção F



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| | | |
|--|--|--|
| Local: Av. Dr. Moraes Salles | | |
| Trecho: seção G | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| | estado de conservação | tampas de inspeção |
| | sem pavimento | floreiras |
| X | ondulações | faixas com vegetação |
| | buracos e falhas | X boa drenagem |
| | plana | favorece acúmulo de água |
| X | pouca inclinação | faixa para mobiliários |
| | íngreme | faixa livre para pedestres |
| | obstáculos originados por rampas de acesso aos lotes | X guia rebaixada para deficientes |
| | superfície anti-derrapante | X área de visibilidade nas esquinas |
| | superfície lisa | X bocas de lobo |
| | piso tátil | postes e colunas interferindo na circulação |
| | grelhas de exaustão com vãos de até 1,5cm | X raízes de árvore interferindo na circulação |
| 2- Pavimento das vias | | |
| | sem pavimento | trincas |
| B | estado de conservação | X aclive |
| | ondulações | declive |
| | buracos e falhas | plano |
| 3- Poluição visual | | |
| | faixas em postes e fachadas | vendedores ambulantes |
| | papéis colados em postes e paredes | obstáculos nas calçadas |
| | placações | outdoors |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | buzinas |
| | médio nível de ruído | motores de veículos |
| X | alto nível de ruído | carros de som e propagandas |
| | aviões e helicópteros | obras |
| 5- Classificação das vias de tráfego | | |
| | expressa | X coletora |
| | arterial | local |
| 6- Tráfego de veículos | | |
| | não há | lentidão do tráfego em horário de pico |
| | alto volume de tráfego | excesso de velocidade |
| X | médio volume de tráfego | veículos estacionados em local não permitido |
| | baixo volume de tráfego | |
| 7- Semáforos | | |
| | estado de conservação | semáforos com contagem de tempo para pedestres |
| | semáforos com contagem de tempo | X radares de velocidade |
| X | semáforos para pedestres | X radares de avanço de semáforo |
| 8- Sistema de transportes | | |
| X | automóvel | X moto |
| X | ônibus | bicicleta |
| X | caminhões | outros |
| 9- Uso do Solo | | |
| | residencial | residencial |
| X | comercial | industrial |
| | misto | institucional |
| 10- Mobiliário Urbano | | |
| X | não há | postes com fiação |
| | banca de jornal | postes com iluminação |
| | banca de flores | fiação subterrânea |
| | caixa de correio | ciclovia |
| | orelhão | painéis de pedestres |
| | orelhão adaptado | ponto de ônibus |
| | lixeira | ponto de ônibus adaptado |
| | bancos | espaço de sociabilização |
| | indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | | |
| | não há | X crianças |
| | baixo | X adultos |
| X | moderado | idosos |
| | intenso | idosos em cadeira de roda |
| X | estudantes | deficientes visuais |
| X | trabalhadores | deficientes auditivos |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | X curta espera para travessia |
| | difícil percepção da travessia | longa espera para travessia |
| | travessia elevada | guia rebaixada junto à faixa de pedestres |
| | iluminação | X caminho para a travessia sem barreiras |
| | iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| | guias rebaixadas alinhadas entre si nos lados opostos da via | guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | | |
| X | não há | está localizado próximo ao acesso do pólo gerador de atração |
| | possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| | dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 8 - Av. Dr. Moraes Salles - seção G



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| | | |
|--|--|--|
| Local: Av. Dr. Moraes Salles | | |
| Trecho: seção H | | |
| 1- Calçada (*) estado de conservação: B - Bom R - Regular M - Mau (**) FP - existe porém Fora do Padrão | | |
| R | estado de conservação | tampas de inspeção |
| | sem pavimento | floréis |
| | ondulações | faixas com vegetação |
| | buracos e falhas | boa drenagem |
| | plana | favorece acúmulo de água |
| | pouca inclinação | faixa para mobiliários |
| X | íngreme | faixa livre para pedestres |
| X | obstáculos originados por rampas de acesso aos lotes | guia rebaixada para deficientes |
| | superfície anti-derrapante | área de visibilidade nas esquinas |
| | superfície lisa | bocas de lobo |
| | piso tátil | X postes e colunas interferindo na circulação |
| | grelhas de exaustão com vãos de até 1,5cm | |
| 2- Pavimento das vias | | |
| | sem pavimento | trincas |
| R | estado de conservação | X aclive |
| X | ondulações | declive |
| | buracos e falhas | plano |
| 3- Poluição visual | | |
| | faixas em postes e fachadas | vendedores ambulantes |
| | papéis colados em postes e paredes | obstáculos nas calçadas |
| | placações | outdoors |
| | painéis de fachadas fora dos padrões | |
| 4- Poluição sonora | | |
| | baixo nível de ruído | X buzinas |
| | médio nível de ruído | X motores de veículos |
| X | alto nível de ruído | carros de som e propagandas |
| | aviões e helicópteros | obras |
| 5- Classificação das vias de tráfego | | |
| | expressa | X coletora |
| | arterial | local |
| 6- Tráfego de veículos | | |
| | não há | lentidão do tráfego em horário de pico |
| X | alto volume de tráfego | excesso de velocidade |
| | médio volume de tráfego | veículos estacionados em local não permitido |
| | baixo volume de tráfego | |
| 7- Semáforos | | |
| | estado de conservação | semáforos com contagem de tempo para pedestres |
| | semáforos com contagem de tempo | radares de velocidade |
| | semáforos para pedestres | radares de avanço de semáforo |
| 8- Sistema de transportes | | |
| X | automóvel | X moto |
| X | ônibus | bicicleta |
| X | caminhões | outros |
| 9- Uso do Solo | | |
| | residencial | residencial |
| X | comercial | industrial |
| | misto | institucional |
| 10- Mobiliário Urbano | | |
| | não há | X postes com fiação |
| | banca de jornal | X postes com iluminação |
| | banca de flores | fiação subterrânea |
| | caixa de correio | ciclovia |
| | orelhão | painéis de pedestres |
| | orelhão adaptado | ponto de ônibus |
| | lixeira | ponto de ônibus adaptado |
| | bancos | espaço de sociabilização |
| | indicações em braille em equipamentos | piso tátil na base dos equipamentos |
| 11- Circulação de pedestres | | |
| | não há | crianças |
| | baixo | X adultos |
| X | moderado | idosos |
| | intenso | idosos em cadeira de roda |
| | estudantes | deficientes visuais |
| X | trabalhadores | deficientes auditivos |
| | turistas | |
| 12- Faixa de travessia | | |
| X | fácil percepção da travessia | curta espera para travessia |
| | difícil percepção da travessia | longa espera para travessia |
| | travessia elevada | X guia rebaixada junto à faixa de pedestres |
| | iluminação | caminho para a travessia sem barreiras |
| | iluminação de faixa de pedestres | caminho para a travessia com barreiras |
| | guias rebaixadas alinhadas entre si nos lados opostos da via | guia rebaixada de acordo com as normas |
| 13- Estacionamento especial | | |
| X | não há | está localizado próximo ao acesso do pólo gerador de atração |
| | possui rebaixamento de guia | sinalização vertical dentro dos padrões |
| | dimensões 2,30x 5,50m | sinalização horizontal dentro dos padrões |

Tabela 9 - Av. Dr. Moraes Salles - seção H

E. Uso e ocupação do solo no entorno do empreendimento

Av. Joaquim de Paula Souza, s/nº - Sítio dos Periquitos, Caixa Postal - 07 - Pedra Bela – SP - BR
E-mail: agesus@uol.com.br Fone/fax: (0xx11) 4037-1308 / (0xx11) 996.526.575



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Os principais polos geradores próximos ao empreendimento são os que segue:

Supermercado Pão de Açúcar, Supermercado Dia, lojas de conveniências, concessionárias, prédio de escritórios, posto de gasolina, restaurantes, bares e comércios em geral.

Destaca-se também posto policial, feira livre e escolas de ensino fundamental, médio, universidade e berçário.



Figura 54 - Usos do solo

Principais serviços de interesse público próximos ao local



Figura 55 - Mapa de serviços de interesse público

Av. Joaquim de Paula Souza, s/nº - Sítio dos Periquitos, Caixa Postal - 07 - Pedra Bela – SP - BR
E-mail: agesus@uol.com.br
Fone/fax: (0xx11) 4037-1308 / (0xx11) 996.526.575



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F. Pontos de parada de ônibus e taxi

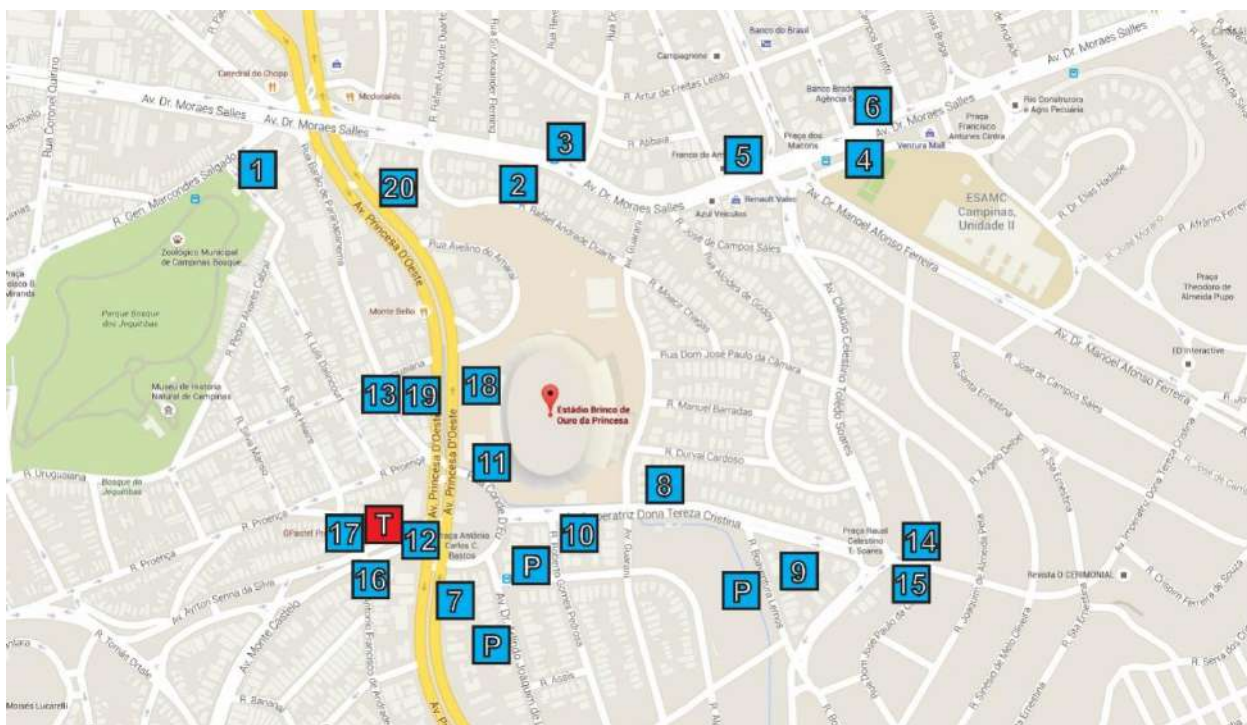


Figura 56 - localização dos pontos de parada e taxi

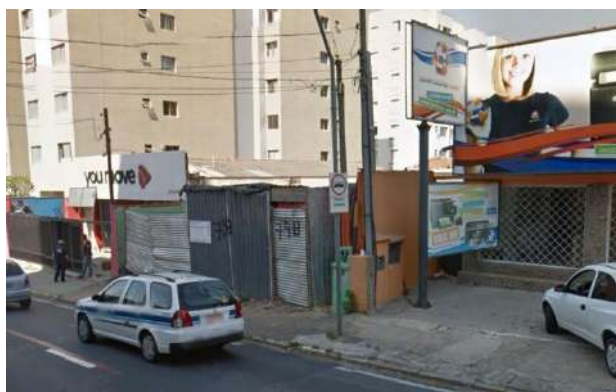


Figura 57 - ponto de parada 1 - Rua general Marcondes Salgado

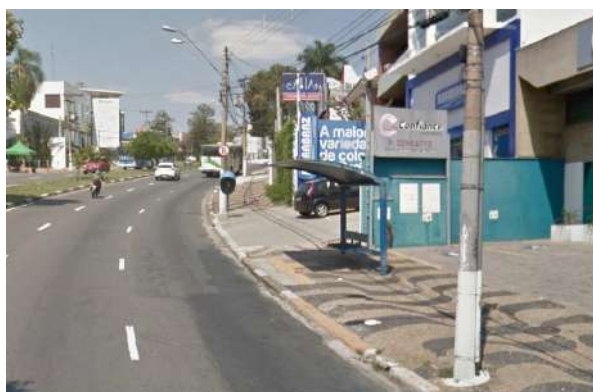


Figura 58 – ponto de para 2 - Av. Dr. Moraes Salles – Bairro



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Figura 59 – ponto de parada 3 -Av. Dr. Moraes Salles - Centro



Figura 60 – ponto de parada 4 -Av. Dr. Moraes Salles - Bairro



Figura 61- ponto de parada 5 -Av. Dr. Moraes Salles - Centro



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Figura 62- ponto de para 6 - Av. Dr. Moraes Salles - Centro



Figura 63 - ponto de parada 7 - Av. Princesa D'Oeste - centro



Figura 64 - ponto da parada 8 - Av. Imperatriz D. Tereza Cristina – Centro



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Figura 65 - ponto de parada 9 - Rua Boaventura Lemos - Centro



Figura 66 - ponto de parada 10 - Av. Imperatriz D. Tereza Cristina - Bairro



Figura 67 - ponto de parada 11 - Rua Conde D'Eu



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Figura 68 - ponto de parada 12 - Av. Princesa D'Oeste - Bairro

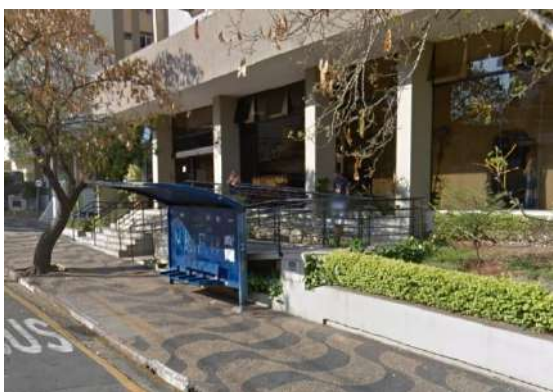


Figura 69 - ponto de parada 13 - Rua Barão de Paranapanema - Centro

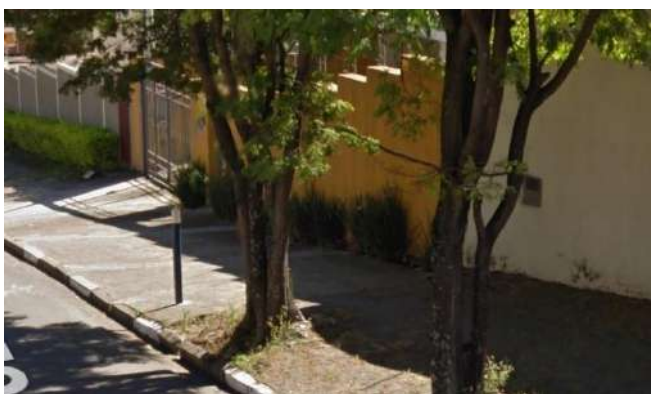


Figura 70 - ponto de parada 14 - Av. Imperatriz D. Tereza Cristina - Centro



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Figura 71 - ponto de parada 15 - Av. Imperatriz D. Tereza Cristina - Bairro



Figura 72 - ponto de parada 16 - Av. Ayrton Senna - Centro



Figura 73 - ponto de parada 17 - Av. Ayrton Senna - Bairro



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Figura 74 - ponto de parada 18 - Av. Princesa D'Oeste - Centro



Figura 75 - ponto de parada 19 - Av. Princesa D'Oeste - Bairro



Figura 76 - ponto de parada 20 - Av. Princesa D'Oeste – Centro

Todos os pontos de parada de ônibus não possuem estruturas de atendimento a pessoas com deficiência. Não há padronização dos pontos de parada. Há 7 pontos de parada regulamentados com placas com mensagem complementar. Há 1 ponto regulamentado com placa tipo I-23 e 10 pontos de parada com cobertura. Há três pontos de parada sem indicação de localização. Os pontos de parada com cobertura encontram-se em bom estado de conservação.

Há também ponto de taxi na Av. Ayrton Senna da Silva, próximo a Av. Princesa D'Oeste.



Figura 77 - ponto de táxi - Av. Ayrton Senna

Nas Av. Princesa D'Oeste a Av. Dr. Moraes Salles em todas as travessias de pedestres, cujos trajetos tenham como destino os pontos de parada de ônibus, possuem rampas de acessibilidade.

G. Acessibilidade ao transporte coletivo da área de influência imediata

O empreendimento é servido pelas seguintes linhas de transporte coletivo municipal:

Linha 125 – Terminal Ouro verde / shopping Iguatemi

Linha 307 – Interbairros I

Linha 308 – Interbairros II

Linha 364 – Jardim São Fernando

Linha 368 – Jardim Itatiaia

Linha 378 – Carrefour Valinhos / Shopping Iguatemi

Linha 385 – Shopping Iguatemi / Rodoviária

Linha 395 – Notre Dame

Linha 397 – Gramado

É também servido pelas seguintes linhas de transporte coletivo intermunicipal:

Linha EMTU 614 – Itatiba

Linha EMTU 724 – Vinhedo

As rotas e frequências foram obtidas pelos sites das empresas e se encontram no **Anexo 1**.



H. Sentidos de circulação na área de influência mediata

Os sentidos de circulação das vias seguem conforme figura abaixo:



sentidos de circulação

Figura 78 - sentidos de circulação



I. Condições da sinalização viária

Durante as vistorias foi avaliada as condições de manutenção da sinalização viária

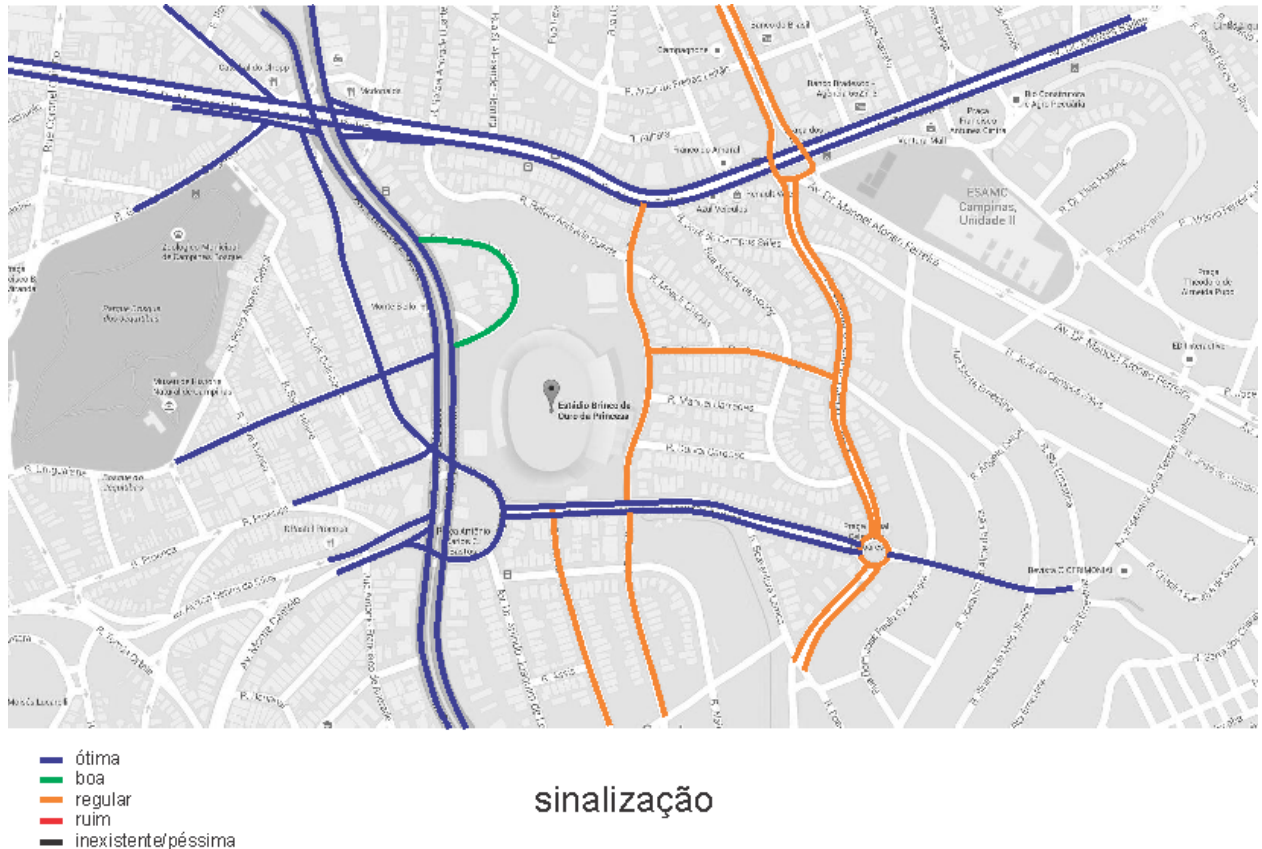


Figura 79 - condições da sinalização viária



J. Condições do pavimento das pistas

Durante as vistorias foi avaliada as condições da pavimentação das pistas

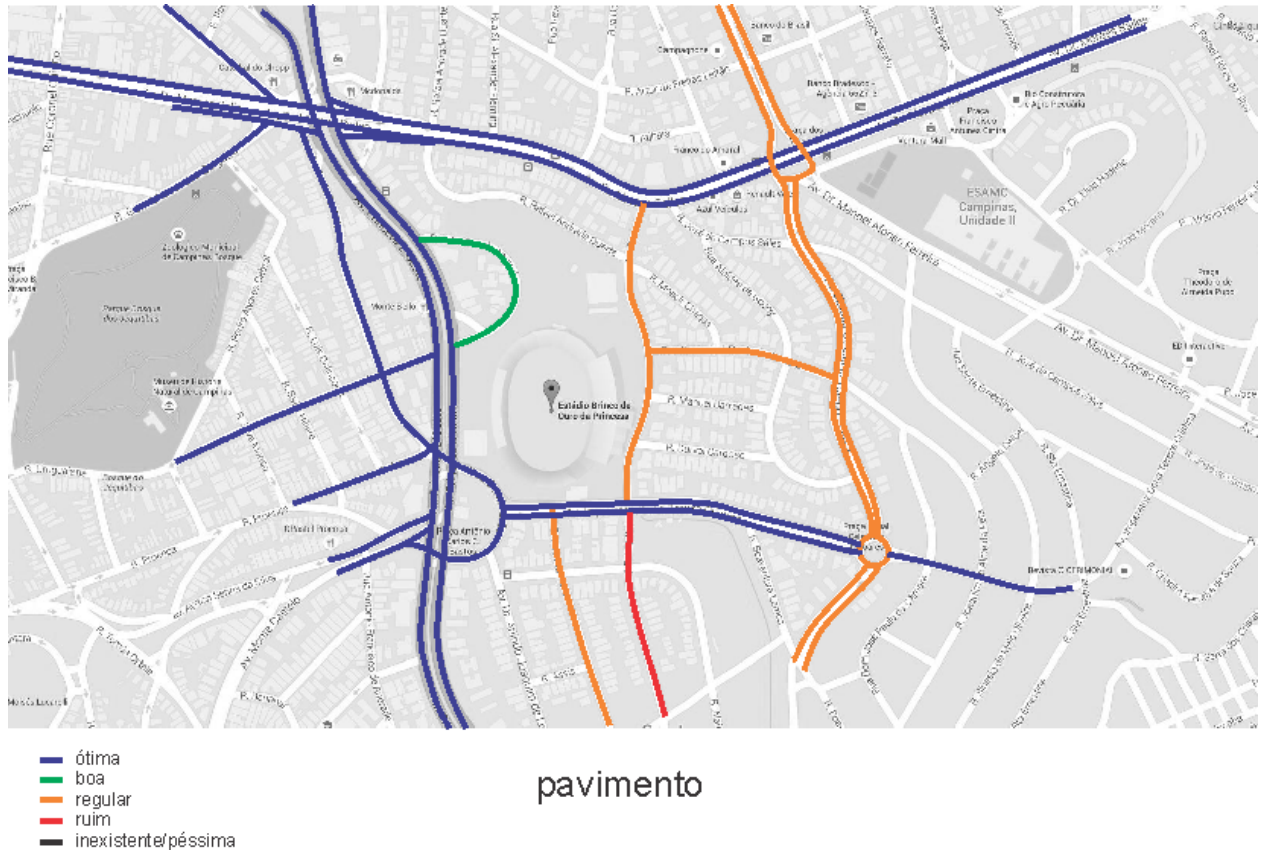


Figura 80 - condições da pavimentação das pistas



K. Condições do pavimento das calçadas

Durante as vistorias foi avaliada as condições da pavimentação das calçadas

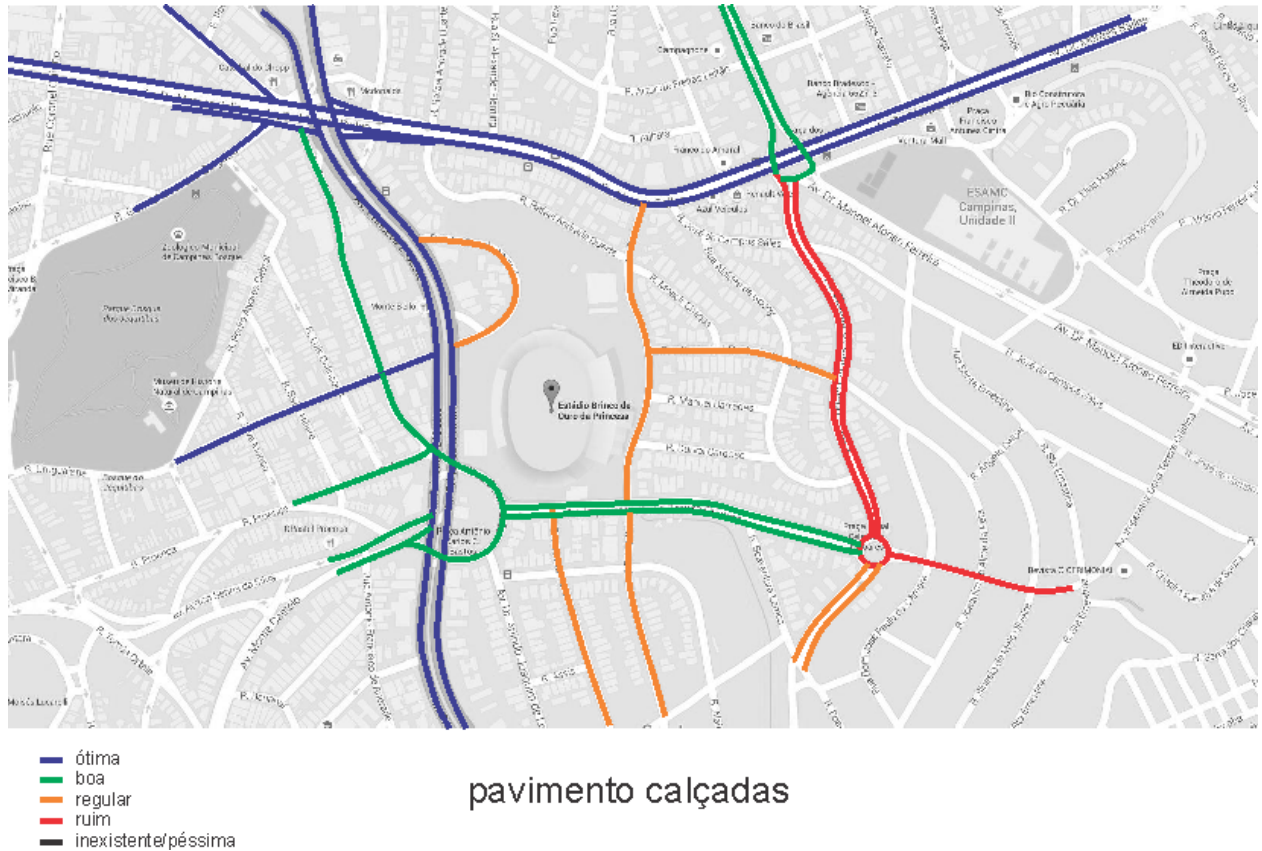


Figura 81 - condições da pavimentação das calçadas



L. Volumetria de pedestres

Durante as vistorias foi avaliada empiricamente a volumetria de pedestres circulando pela área de influência e obteve-se as seguintes intensidades:



Figura 82 - circulação de pedestres



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M. Volumetria veicular atual

As condições de operação atual do sistema viário do entorno foram obtidas através de contagens veiculares classificadas nos horários de pico da manhã entre 07:00 e 09:00, almoço entre 13:00 e 15:00 e tarde entre 17:00 e 19:00, nos dias 23, 24 e 25 de fevereiro, 22 de março, 19 e 26 de abril, dias típicos da semana.

Os postos das contagens veiculares, os horários e os dias da semana foram definidos em conjunto com a EMDEC. Segue abaixo localização:



Figura 83 - localização dos postos de contagens

Segue abaixo croquis contendo os 83 movimentos contados nos postos acima definidos.



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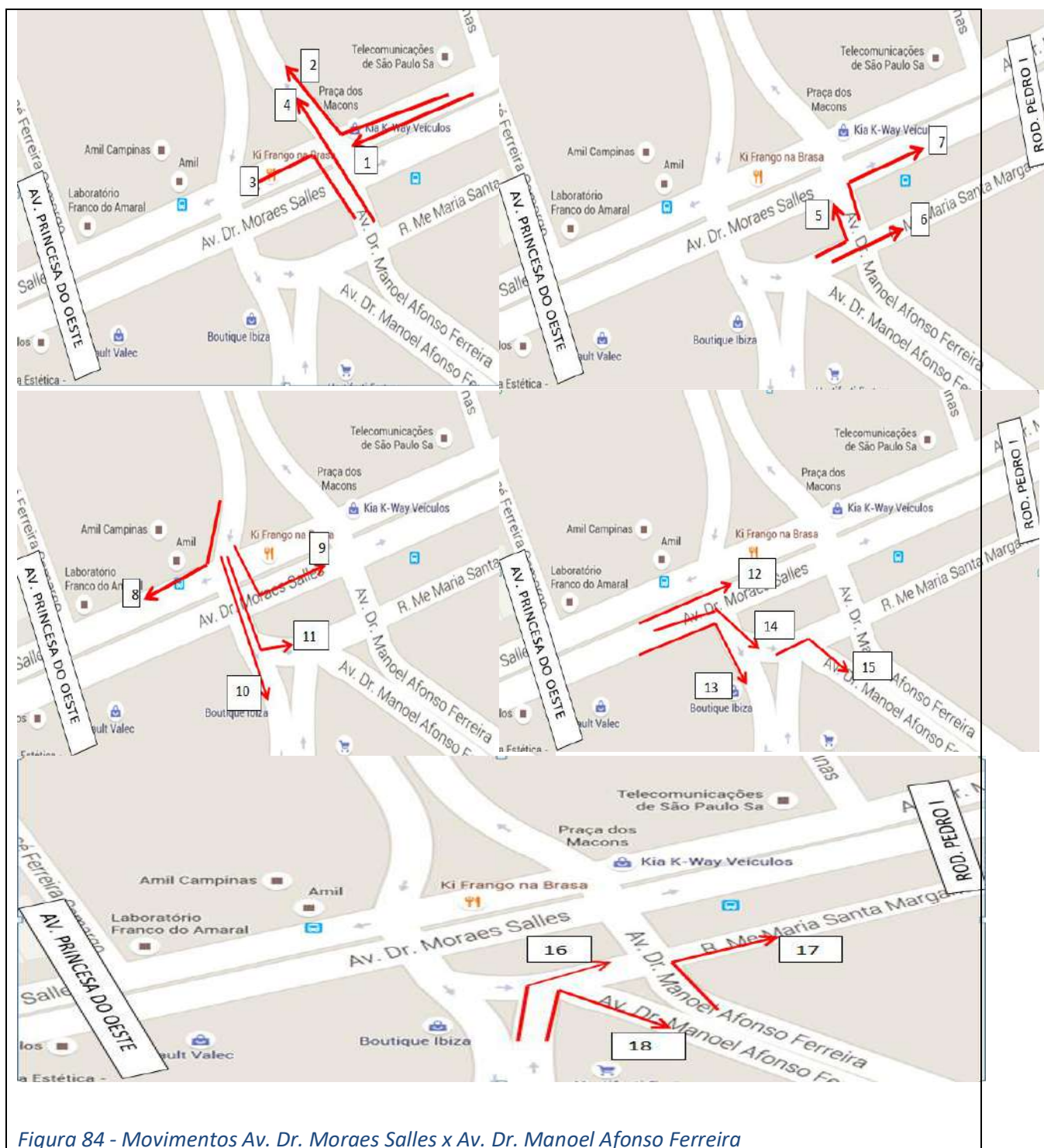


Figura 84 - Movimentos Av. Dr. Moraes Salles x Av. Dr. Manoel Afonso Ferreira



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Figura 85 - Movimentos Praça Raul Celestino de Toledo Soares

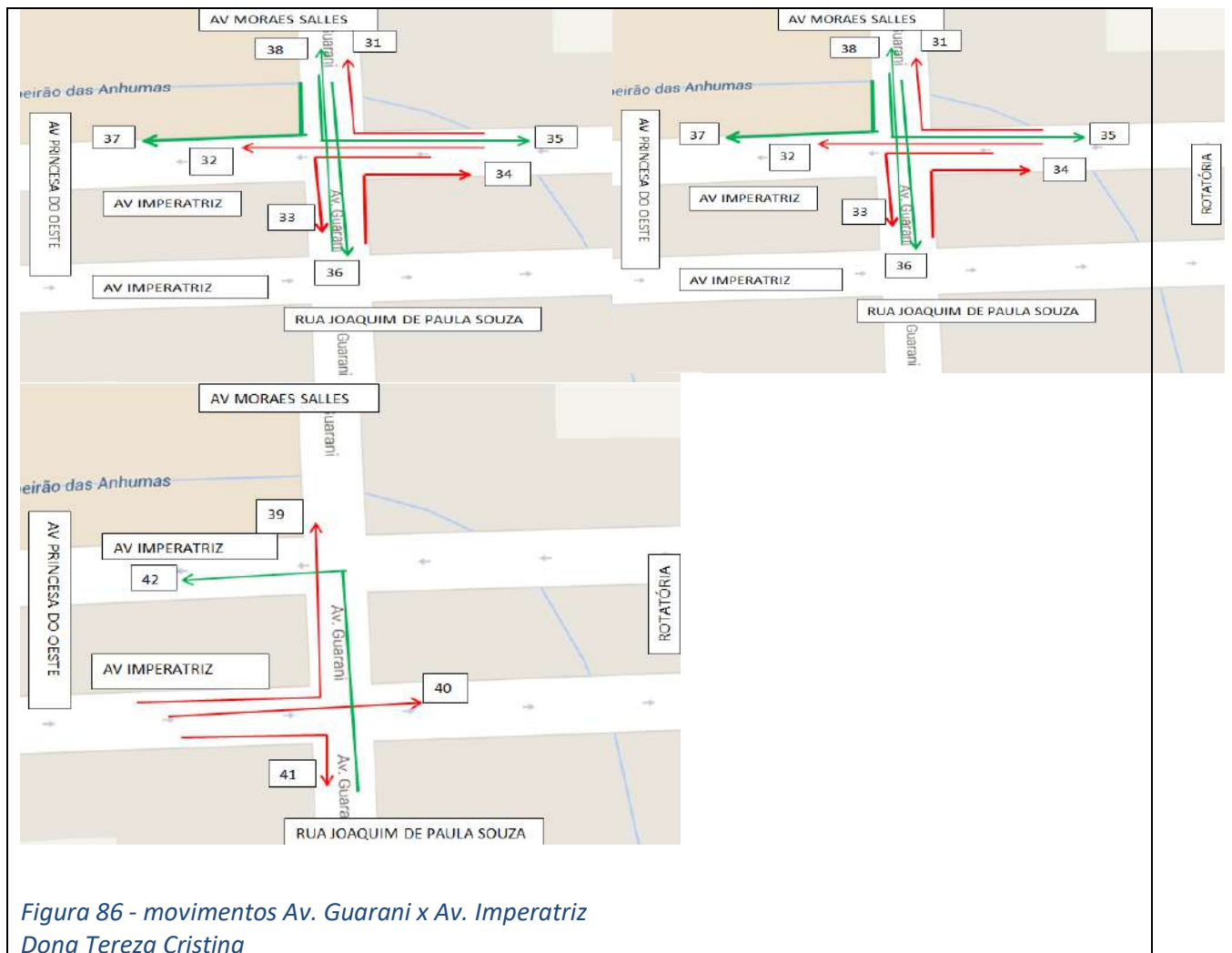


Figura 86 - movimentos Av. Guarani x Av. Imperatriz Dona Tereza Cristina



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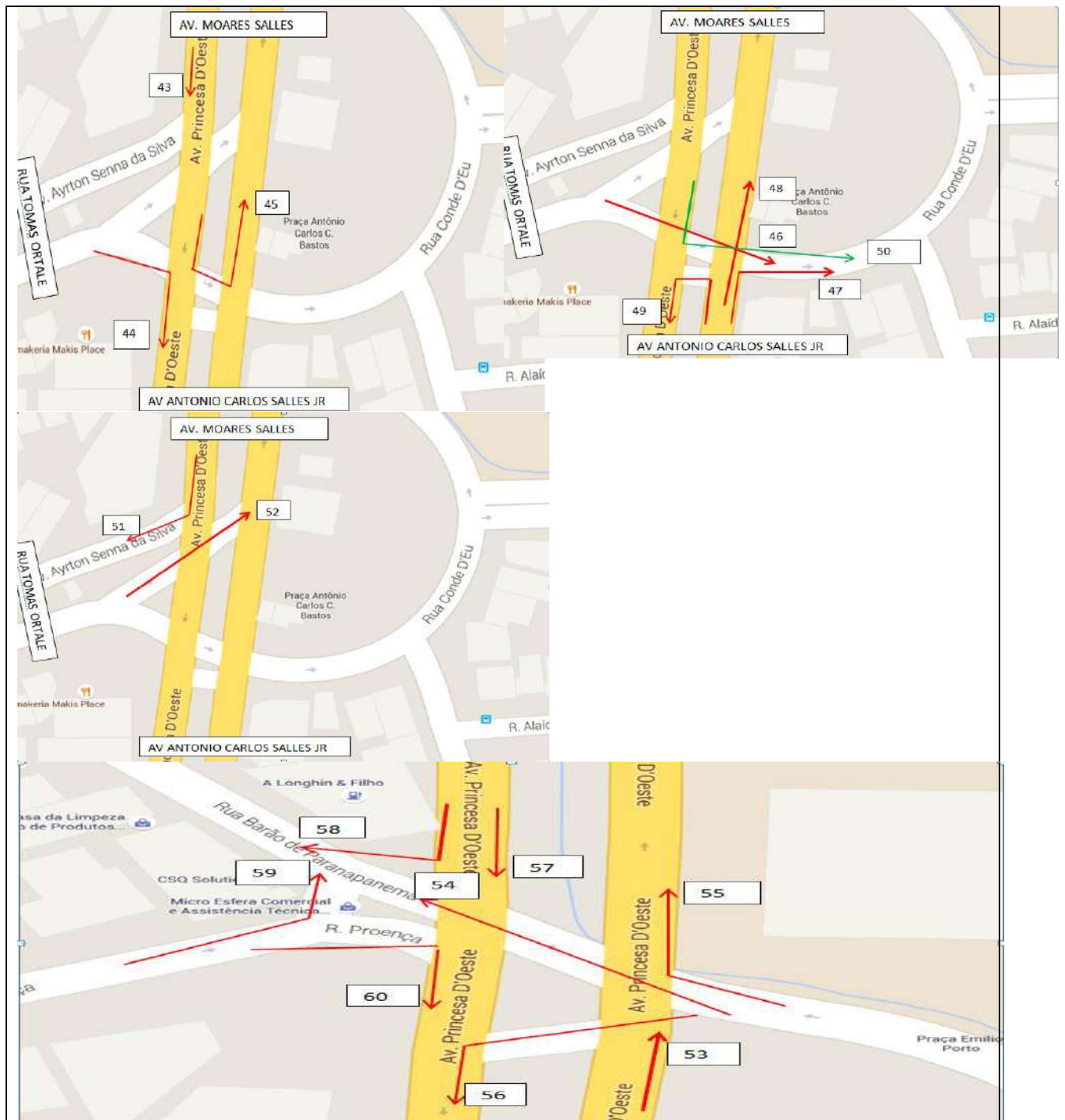


Figura 87 - movimentos Av. Princesa D'Oeste x Rua Conde D'Eu x Rua Barão de Paranapanema



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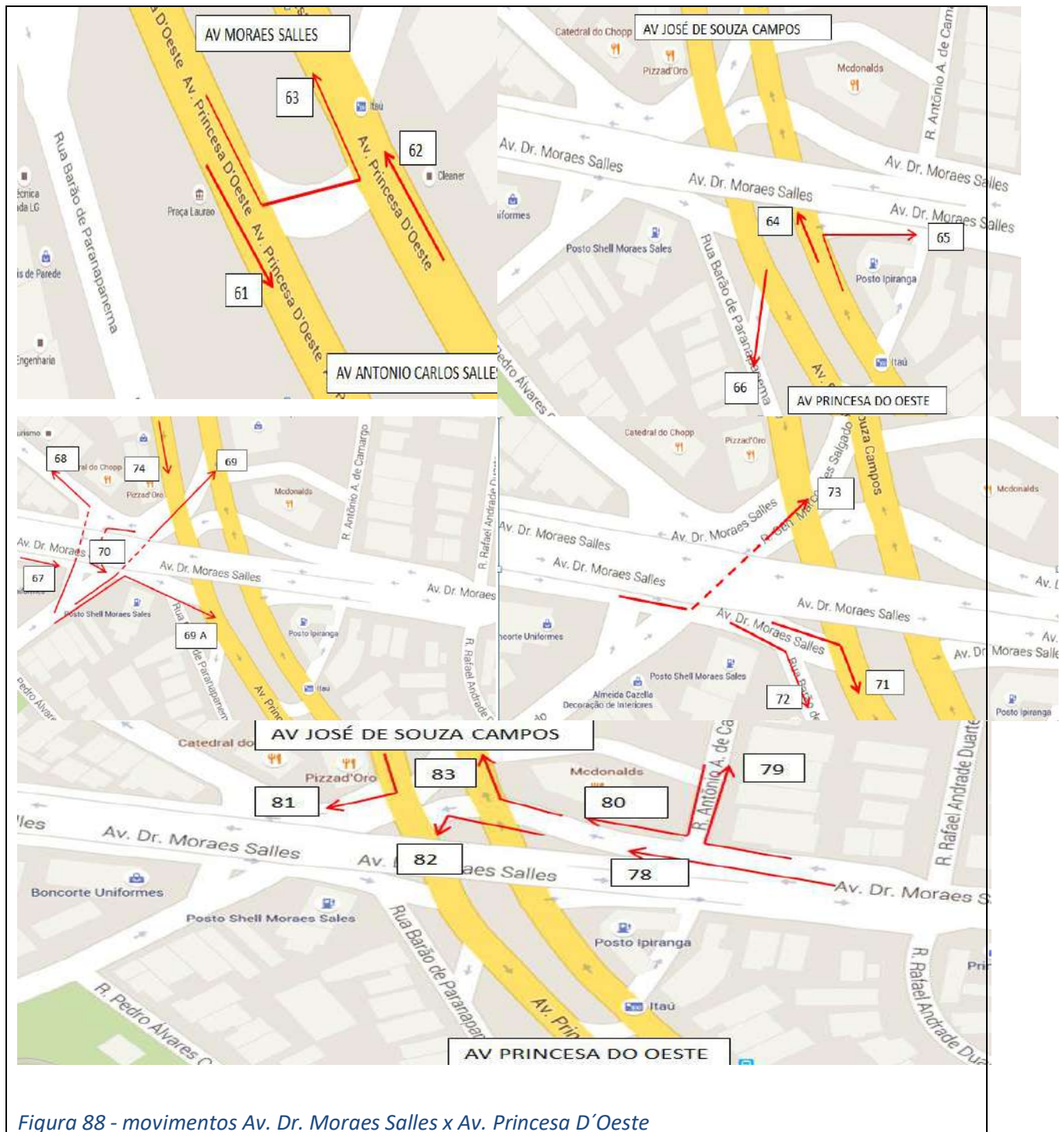


Figura 88 - movimentos Av. Dr. Moraes Salles x Av. Princesa D'Oeste



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Figura 89 - movimentos Av. Dr. Moraes Salles x Av. Guarani

Na contagem veicular classificada de veículos obteve-se a composição do tráfego que é formada basicamente por automóveis, motocicletas, ônibus e caminhões, e comum representarmos os veículos em veículos equivalentes, onde o automóvel possui o fator de equivalência igual a 1,0 e aos demais veículos é atribuído fatores em função da equivalência de efeito que estes produzem na capacidade viária quando comparados a um automóvel. Os fatores de equivalência de veículos utilizados foram os seguintes:

| veículo | fator de equivalência |
|-------------|-----------------------|
| automóvel | 1 |
| ônibus | 2 |
| caminhão | 2 |
| motocicleta | 0,5 |

Tabela 10 - fatores de equivalência

Os resultados das contagens são apresentados na íntegra no **Anexo 2** deste estudo.

A seguir é apresentado um extrato das pesquisas das contagens, onde é informado os volumes das principais aproximações, expressos em veículos equivalentes. Os valores refletem a situação atual e na hora de pico de cada interseção nos períodos selecionados para pesquisa.



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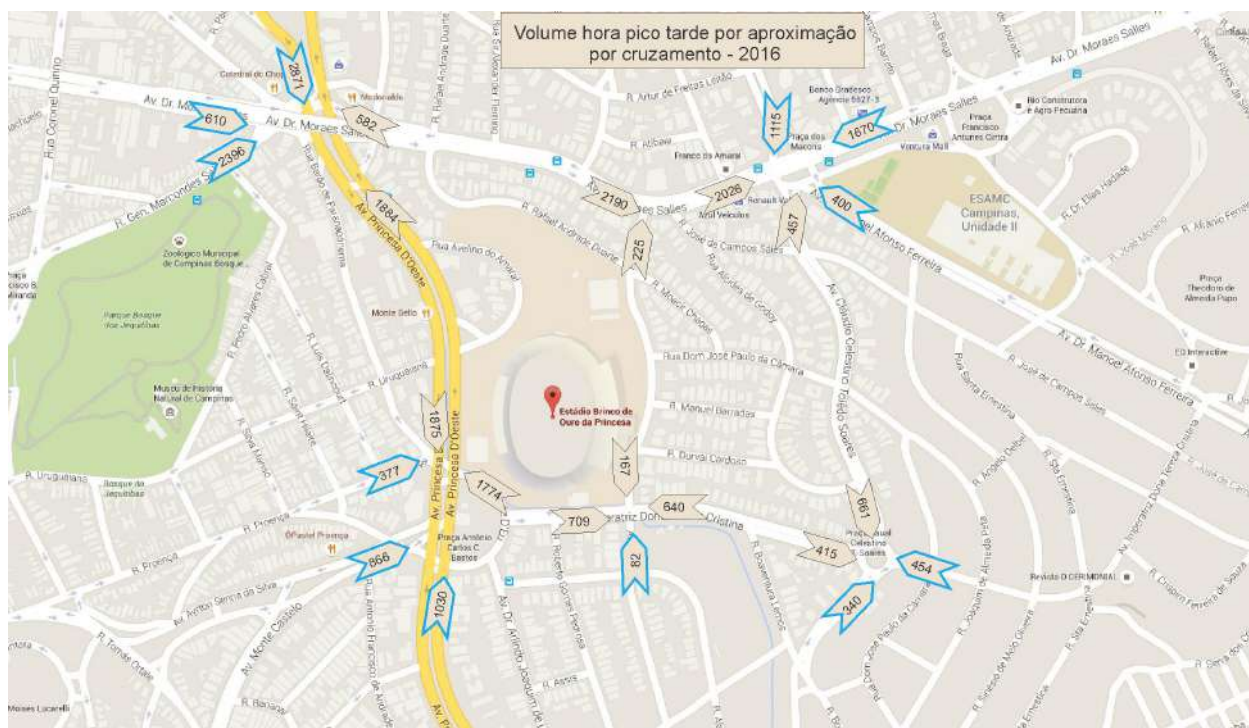


Figura 92 - volume hora pico tarde

Durante as contagens volumétricas do pico da tarde da interseção da Av. Dr. Moraes Salles x Av. Princesa D'Oeste, mais críticas do ponto de vista de volumetrias, obteve-se através dos sites de acompanhamento de tráfego do google maps e waze as lentidões e velocidades:

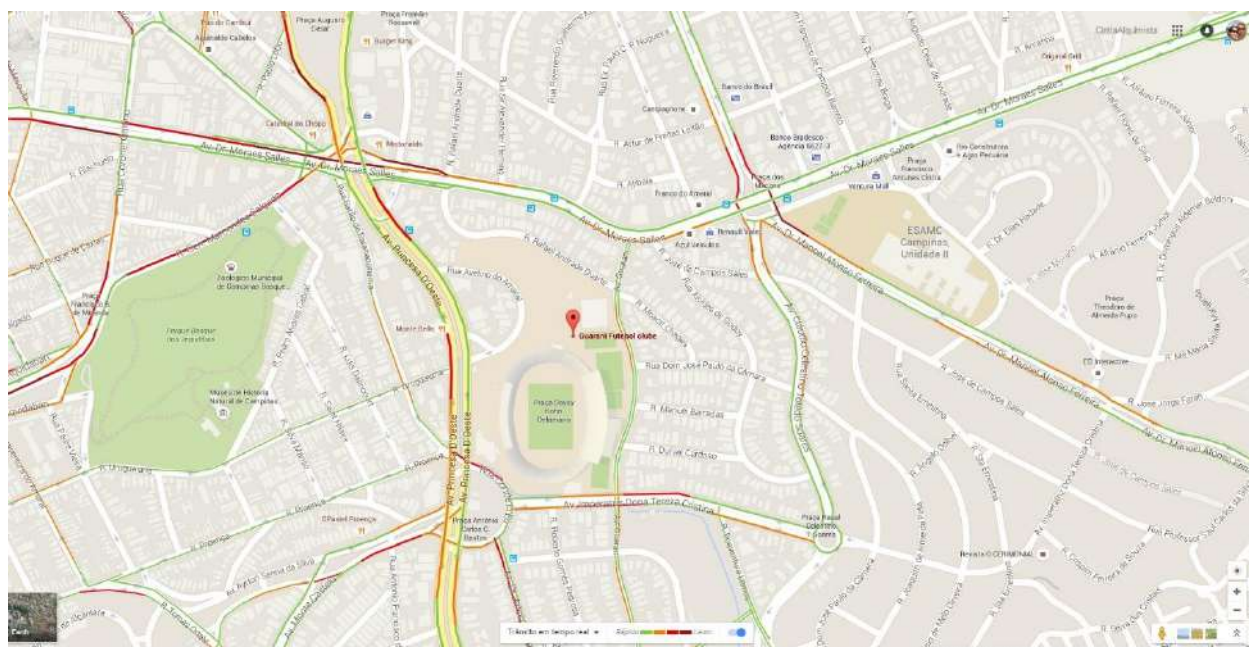


Figura 93 - google maps – lentidão – dia 07/04/2016 às 18:15



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O mapa acima segue a seguinte legenda de cores:

Verde: nenhum trânsito.

Laranja: trânsito moderado.

Vermelho: trânsito intenso. Quanto mais escuro é o vermelho, menor é a velocidade do trânsito na via.

Abaixo figura contando o trânsito nesta interseção em dia típico de semana conforme a fonte do google maps.

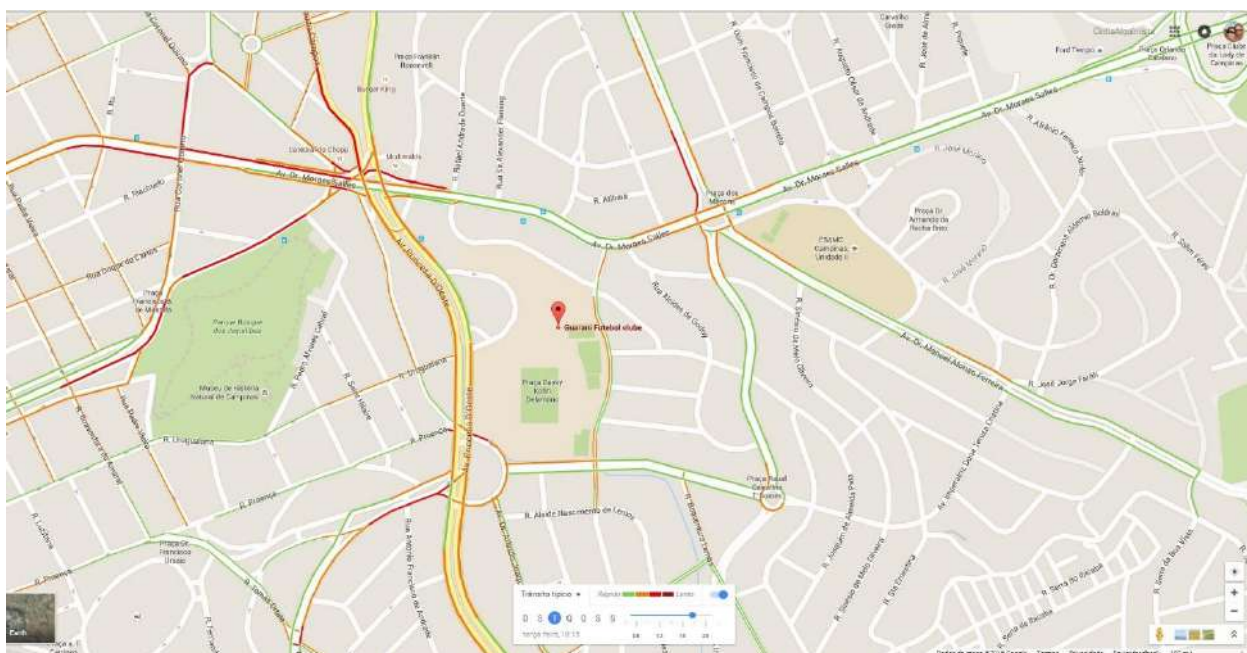


Figura 94 - google maps - dia típico – 18:10

Abaixo site da waze do mesmo dia contando a velocidade da aproximação que continha a maior fila de veículos:

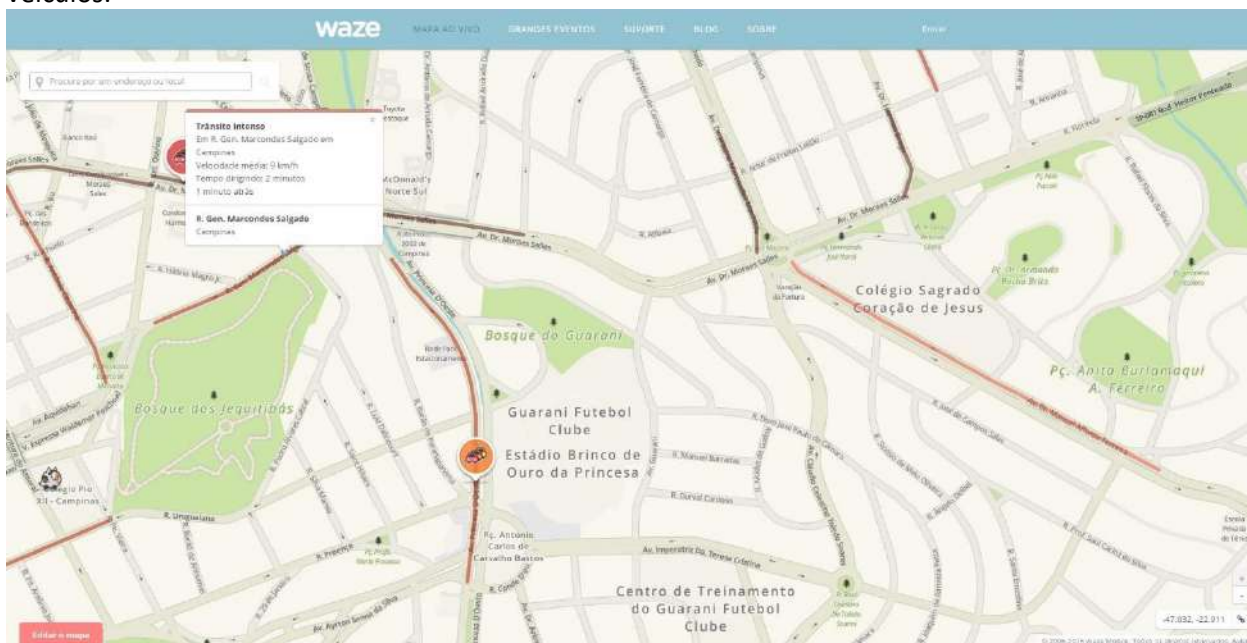


Figura 95 - waze velocidade de 9km/h marcondes salgado



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O mapa acima segue a seguinte legenda de cores:

TRÂNSITO MODERADO

Considera-se moderado, o trânsito em que se consegue desenvolver entre 61 e 90% da velocidade máxima permitida na via.

TRÂNSITO INTENSO

Seguindo o raciocínio anterior, considera-se intenso, o trânsito em que se consegue desenvolver entre 31 e 60% da velocidade máxima permitida na via.

TRÂNSITO PARADO

Concluindo o raciocínio, considera-se parado, o trânsito em que se consegue desenvolver entre 0 e 30% da velocidade máxima permitida na via.



5. AVALIAÇÃO DOS IMPACTOS

A. Situação sem o empreendimento

a. Capacidade viária e nível de Serviço atual nas principais interseções na situação sem o empreendimento ano 2016

Para a avaliação da capacidade viária, utiliza-se o conceito de nível de serviço viário definido pelo Highway Capacity Manual (HCM-2000), através do qual a capacidade básica por faixa de tráfego é de 1.900 veículos/hora por faixa de circulação com largura de 3,6 metros. Estes valores vão diminuindo em função das características geométricas da via, interferências operacionais de manobras de estacionamento, travessia de pedestres, conversões à esquerda e direita, dentre outros. Na área de influência direta do empreendimento há cruzamento não semaforizado. Para a análise do nível de serviço atual foi utilizado programa de micro simulação de tráfego Sim Traffic. Os seguintes dados de entrada foram imputados:

Capacidade básica por faixa de tráfego: 1900 veic/h; Largura das faixas de tráfego; Declividade das vias; volumes de tráfego por movimento; fatores de hora-pico; porcentagem de veículos comerciais; regulamentação de estacionamento e tipo de área.

Segue abaixo tabela contendo os níveis de serviço para interseções não semaforizadas conforme HCM 2000 utilizado pelo programa Simtraffic.

| Control Delay Per Vehicle (s) | LOS by Volume to Capacity Ratio | |
|-------------------------------|---------------------------------|----|
| | ≤1 | >1 |
| ≤10 | A | F |
| >10 and ≤20 | B | F |
| >20 and ≤35 | C | F |
| >35 and ≤55 | D | F |
| >55 and ≤80 | E | F |
| >80 | F | F |

Tabela 11 - atrasos e relação volume/capacidade em relação ao nível de serviço

Além dos dados acima foi fornecida pela equipe da EMDEC a programação semafórica atual dos cruzamentos e as volumetrias dos radares:



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Figura 96 - radar Av. José de Souza Campos



Figura 97 - radar Av. Dr. Moraes Salles Bairro → Centro cruzamento com Av. Dr. Jesuíno Marcondes Salgado



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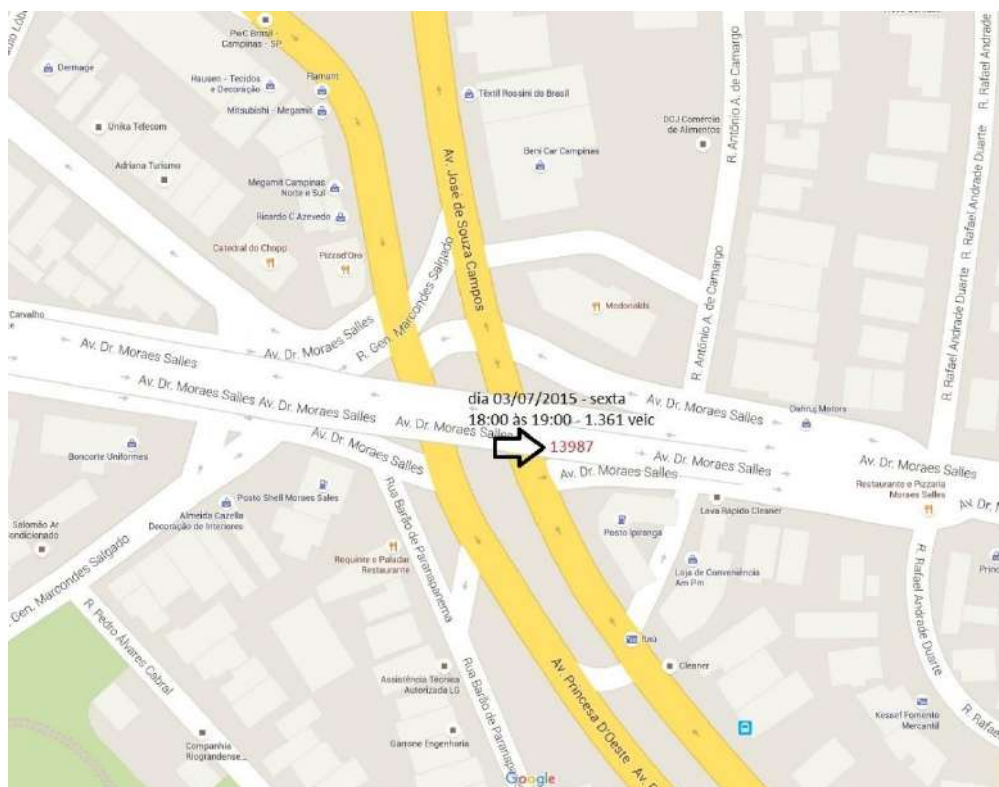


Figura 98 - radar Av. Dr. Moraes Salles Centro--> Bairro

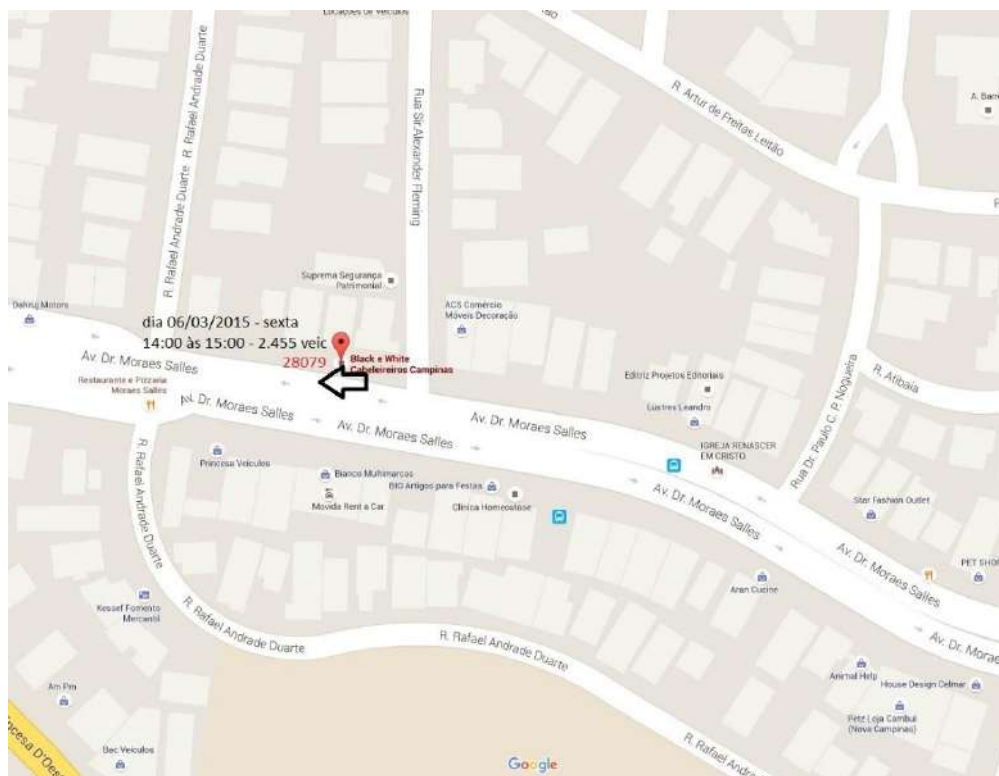


Figura 99 - radar Av. Dr. Moraes Salles Bairro --> Centro

Os dados das contagens veiculares retornaram os seguintes picos das vias

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| CRUZAMENTO | | HORA PICO | | | | | |
|-----------------------------------|-----------------------------------|-----------|-------|--------|-------|-------|-------|
| | | MANHÃ | | ALMOÇO | | TARDE | |
| Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | 07:15 | 08:15 | 13:00 | 14:00 | 17:15 | 18:15 |
| rotatória | | 07:15 | 08:15 | 13:00 | 14:00 | 17:30 | 18:30 |
| Av. Imperatriz D. Tereza Cristina | Av. Guarani | 07:15 | 08:15 | 13:00 | 14:00 | 17:45 | 18:45 |
| Av. Princesa D´Oeste | Rua Conde D´Eu | 07:00 | 08:00 | 13:00 | 14:00 | 17:15 | 18:15 |
| Av. José de Souza Campos | Av. Princesa D´Oeste | 07:15 | 08:15 | 13:00 | 14:00 | 17:15 | 18:15 |
| Av. Dr. Moraes Salles | Av. Guarani | 07:15 | 08:15 | 13:00 | 14:00 | 17:15 | 18:15 |

Tabela 12 - quadro de horas pico

A seqüência de figuras abaixo mostrará os dados imputados, além dos indicadores das simulações de tráfego realizadas para os picos manhã, almoço a tarde, afim de compreensão da situação atual de operação dos cruzamentos.

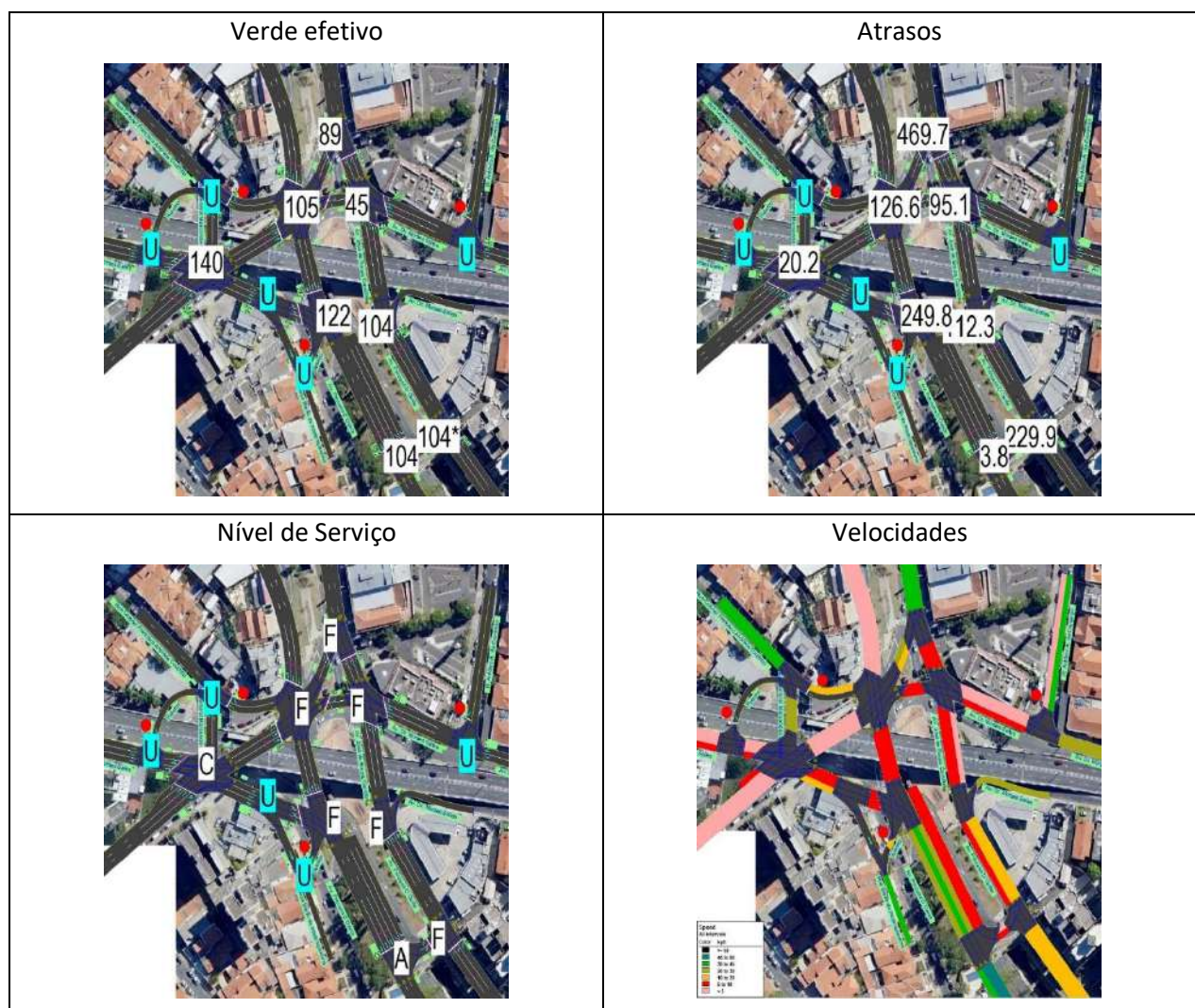


Figura 100 - Av. Princesa D´Oeste x Av. Souza Campos – manhã



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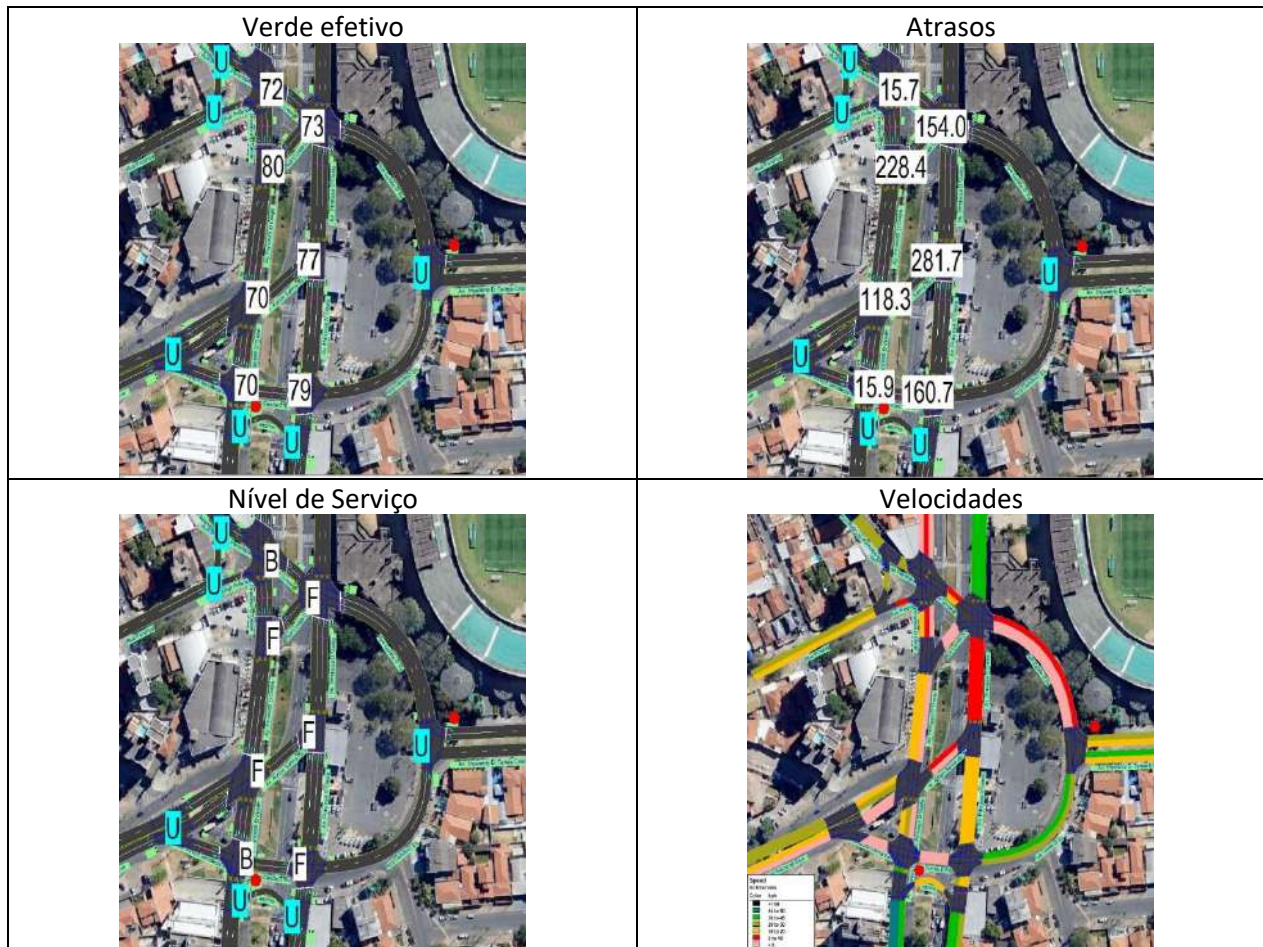


Figura 101 - Av. Princesa D'Oeste x Av. Conde D'Eu - manhã



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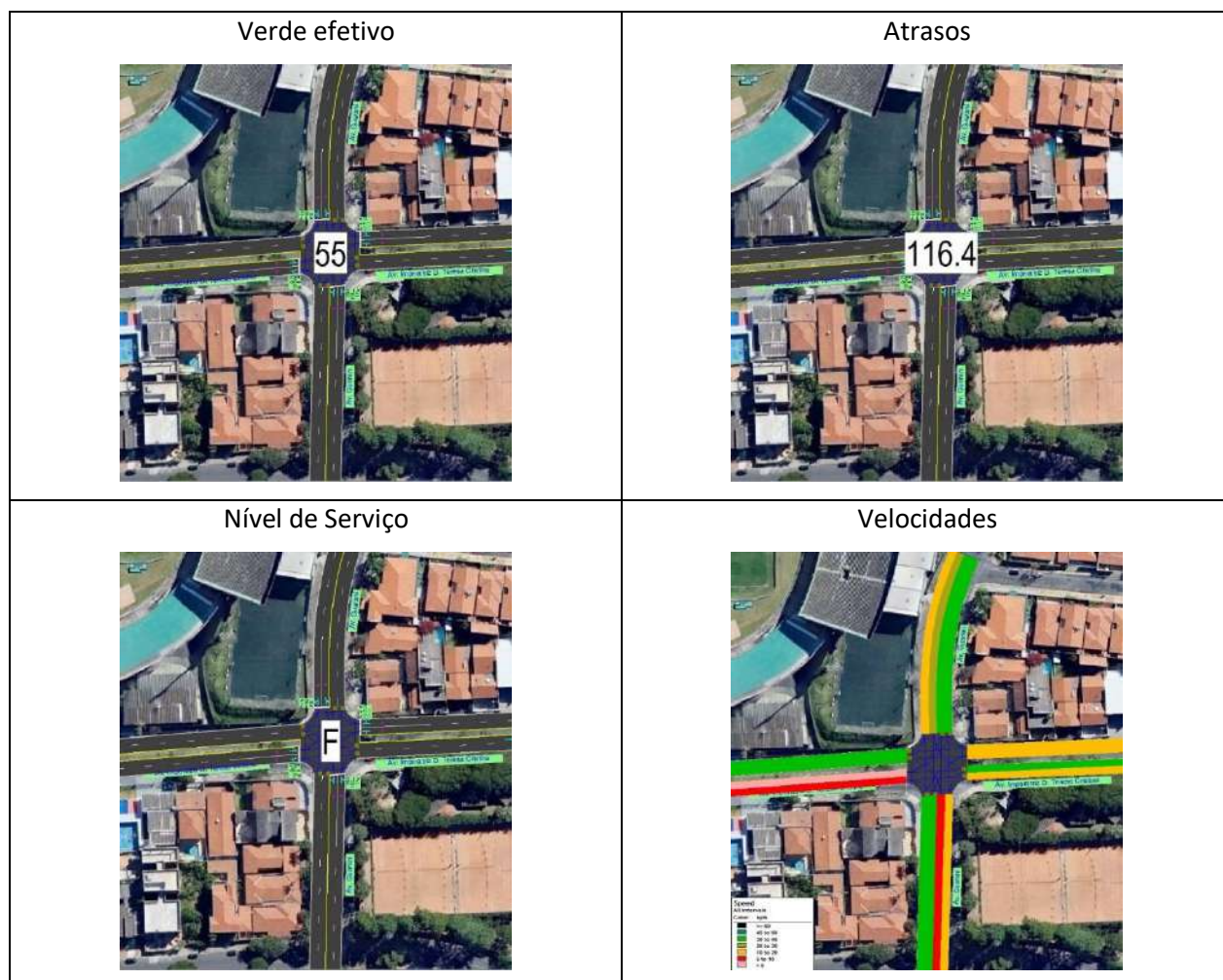


Figura 102 - Av. Imperatriz Tereza Cristina x Av. Guarani - manhã



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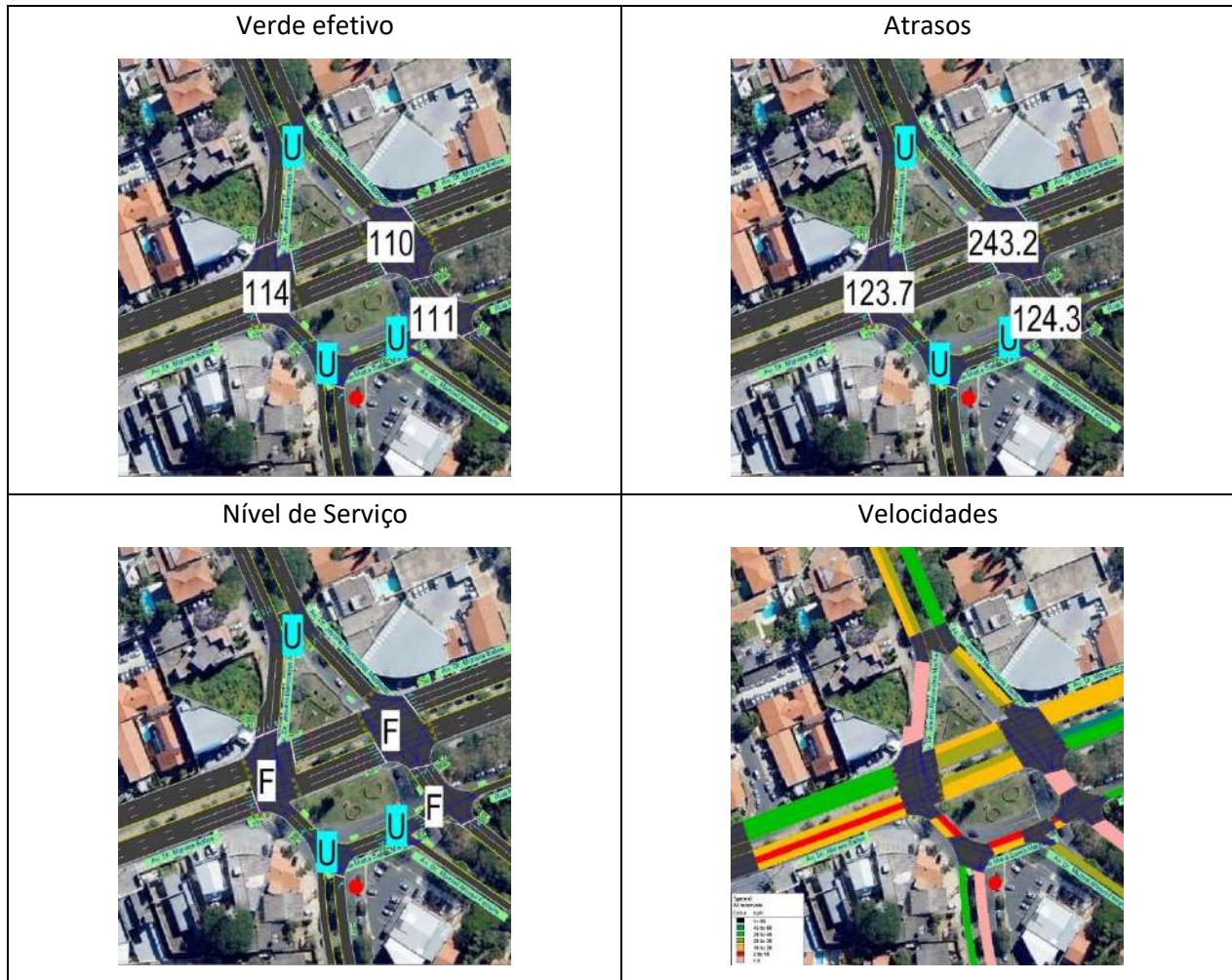


Figura 103 - Av. Dr. Jesuíno Machado x Av. Dr. Moraes Salles - manhã



Figura 104 - Rotatória Av. Imperatriz D. Tereza Cristina x Av. Claudio Celestino Soares – manhã



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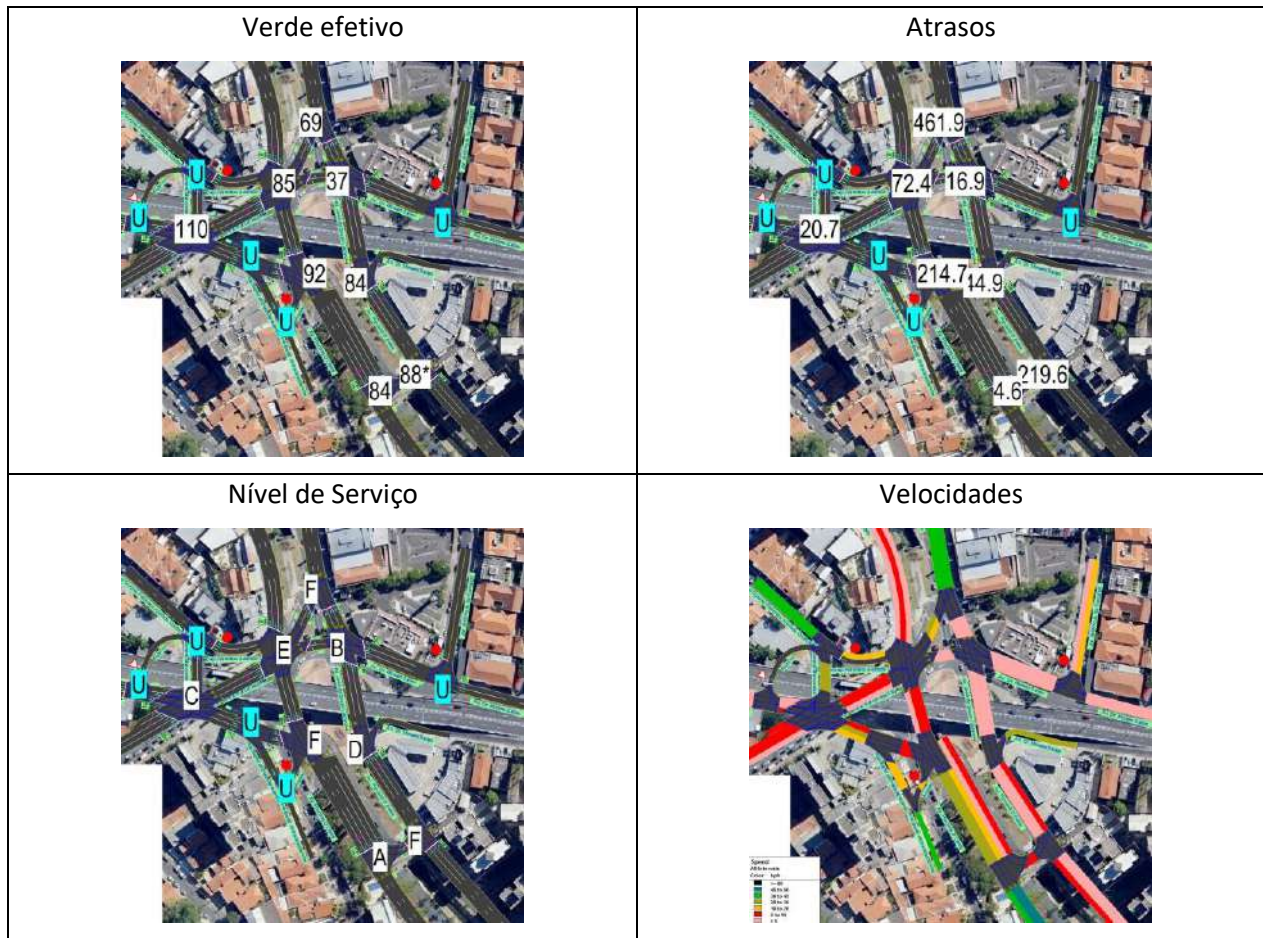


Figura 105 - Av. Princesa D'Oeste x Av. Souza Campos – almoço

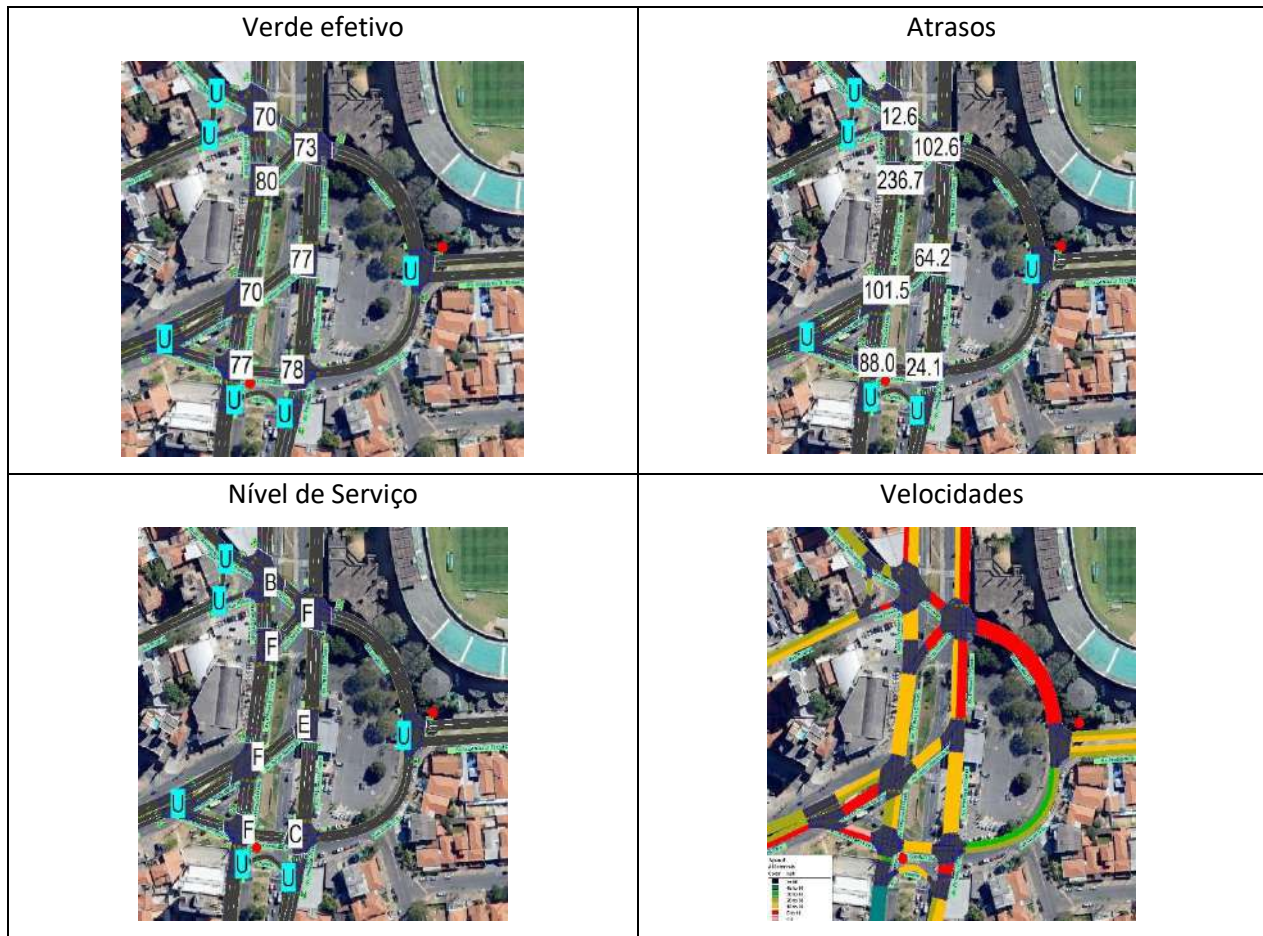


Figura 106 - Av. Princesa D'Oeste x Av. Conde D'Eu – almoço



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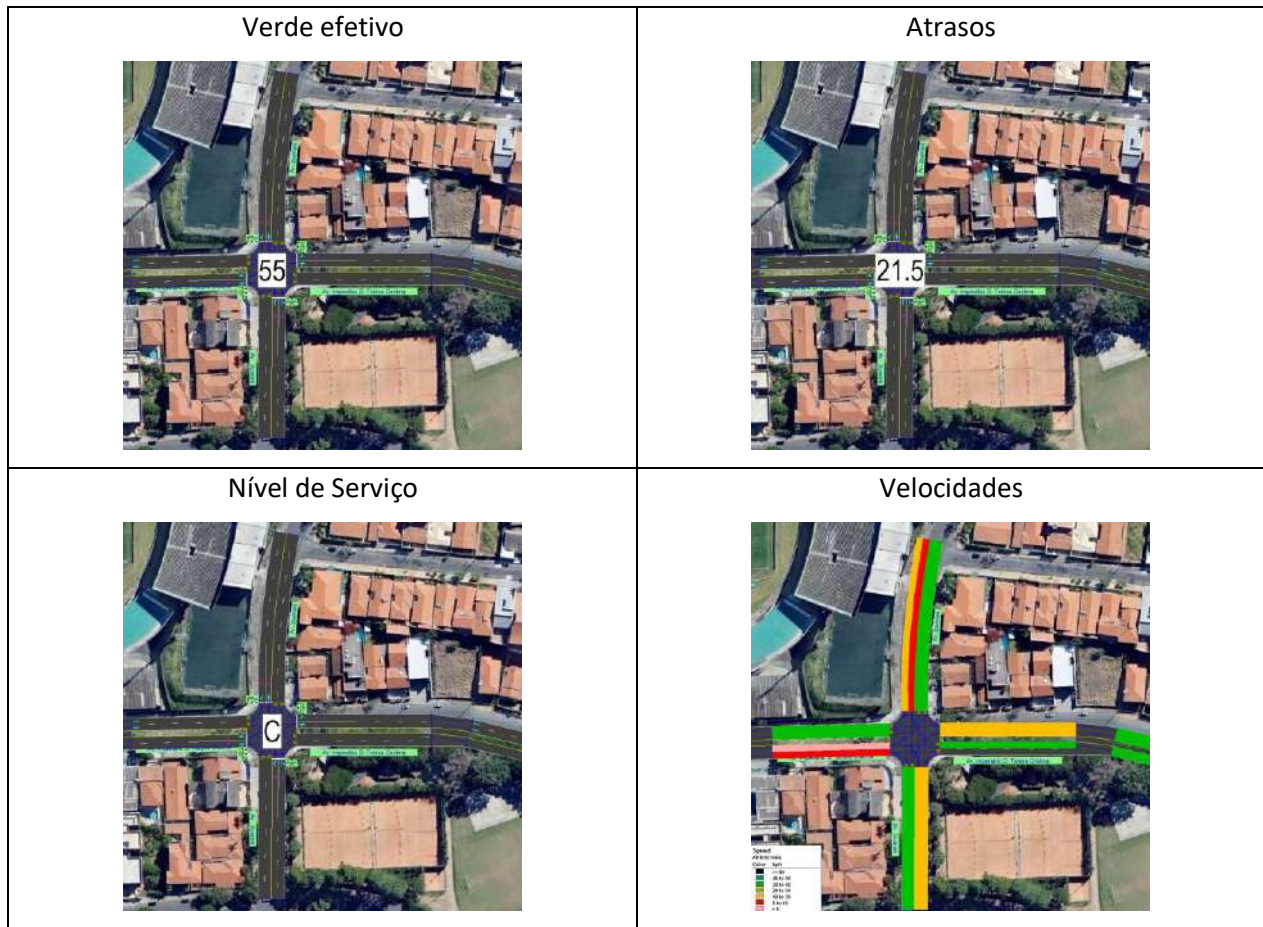


Figura 107 - Av. Imperatriz Tereza Cristina x Av. Guarani – almoço



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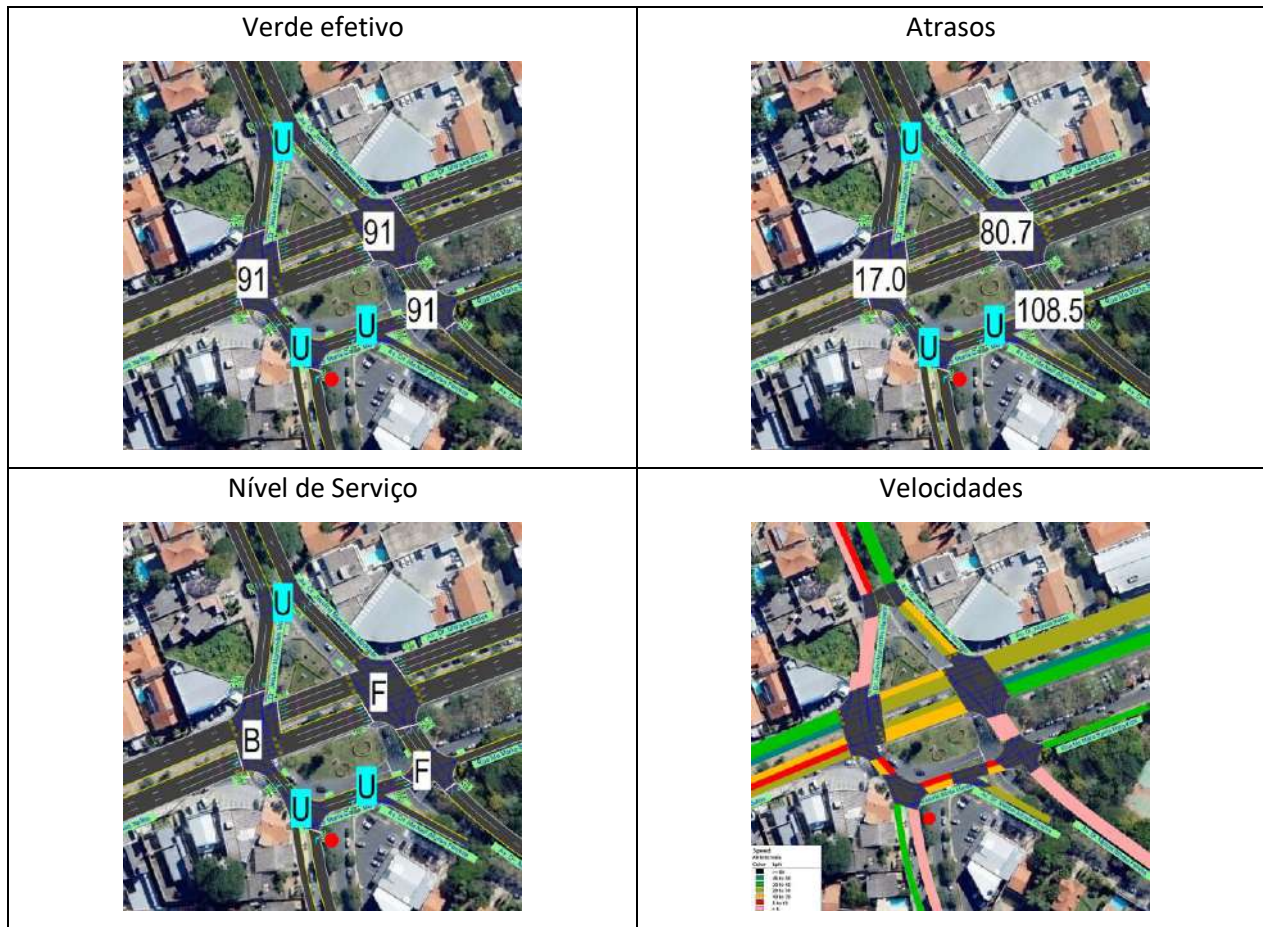


Figura 108 - Av. Dr. Jesuíno Machado x Av. Dr. Moraes Salles - almoço

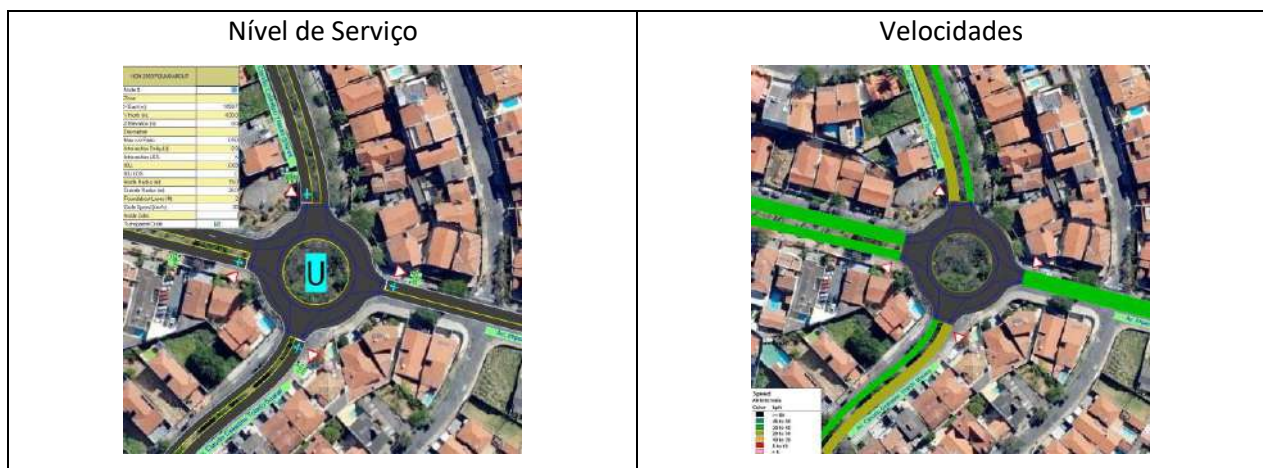


Figura 109 - Rotatória Av. Imperatriz D. Tereza Cristina x Av. Claudio Celestino Soares - almoço



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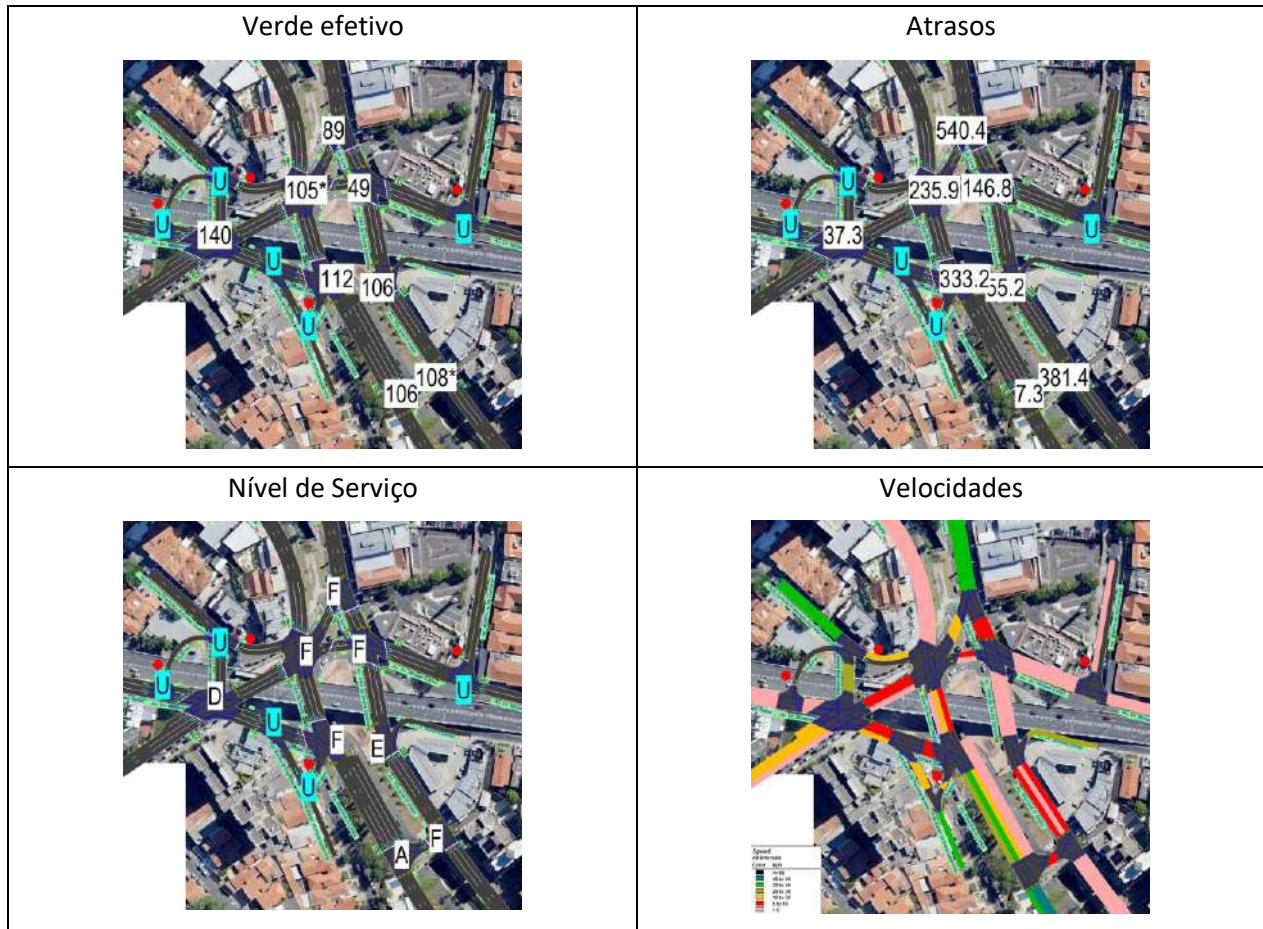


Figura 110 - Av. Princesa D'Oeste x Av. Souza Campos - tarde



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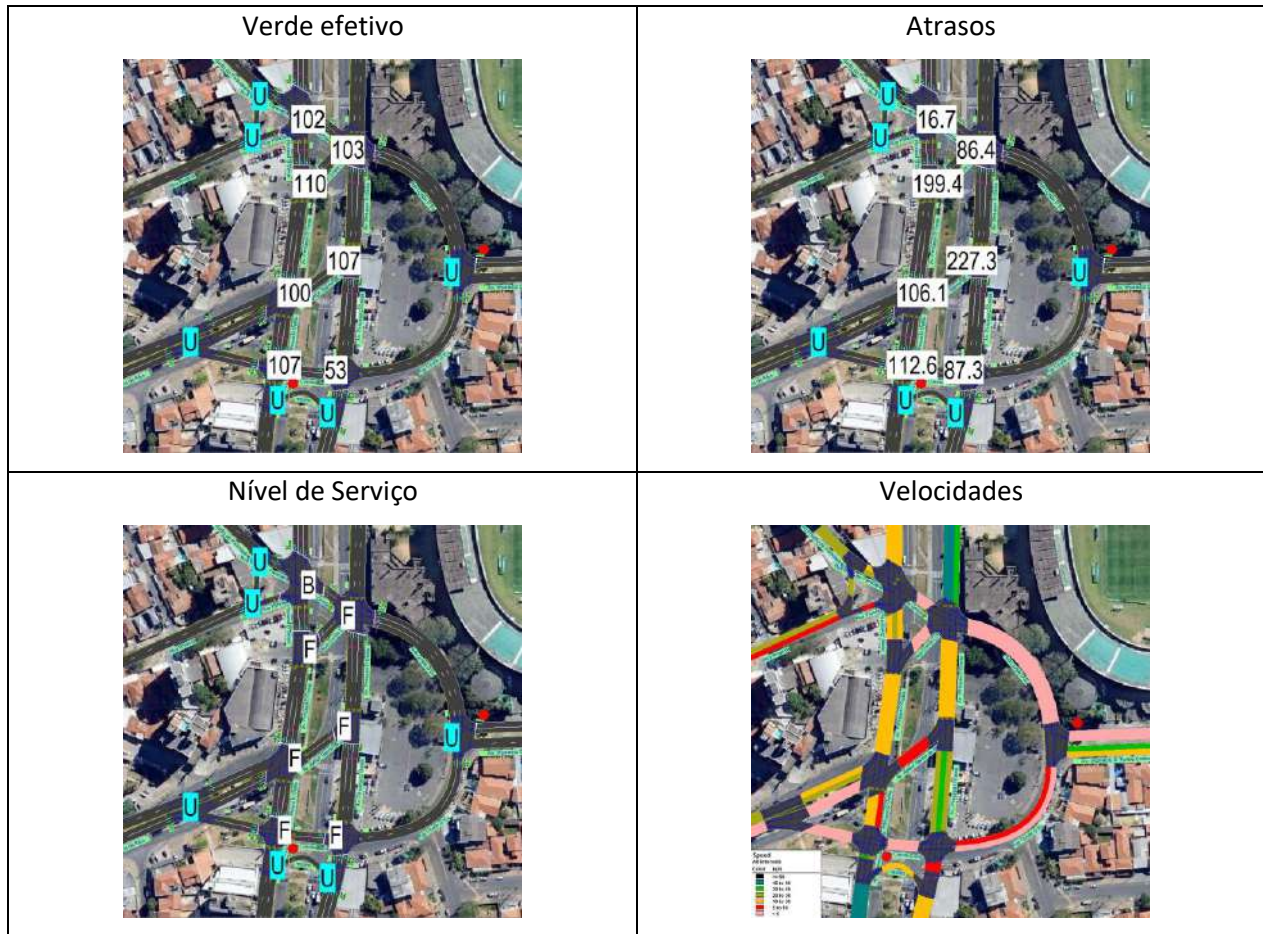


Figura 111 - Av. Princesa D'Oeste x Av. Conde D'Eu - tarde



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Figura 112 - Av. Imperatriz Tereza Cristina x Av. Guarani - tarde



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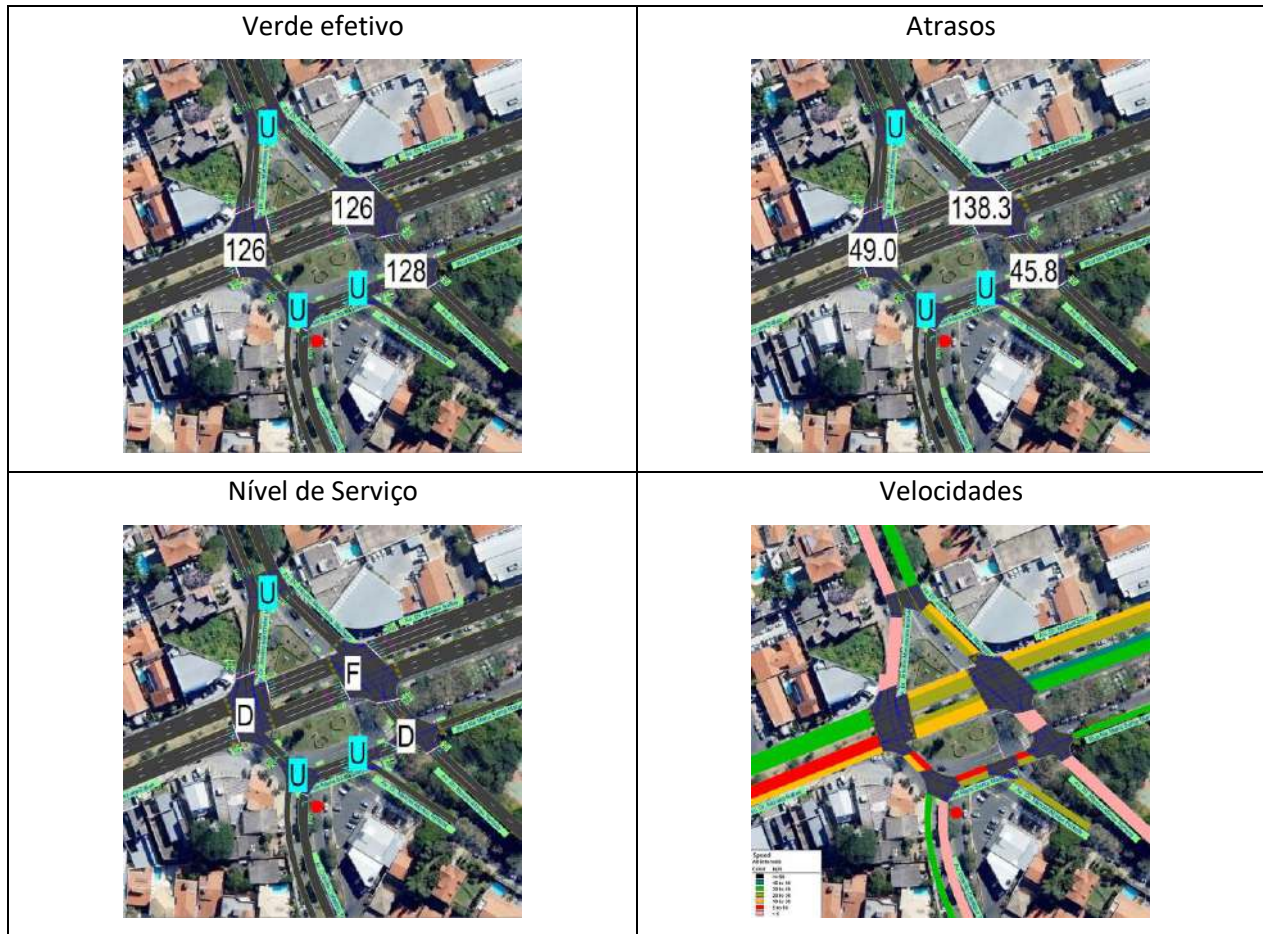


Figura 113 - Av. Dr. Jesuíno Machado x Av. Dr. Moraes Salles - tarde

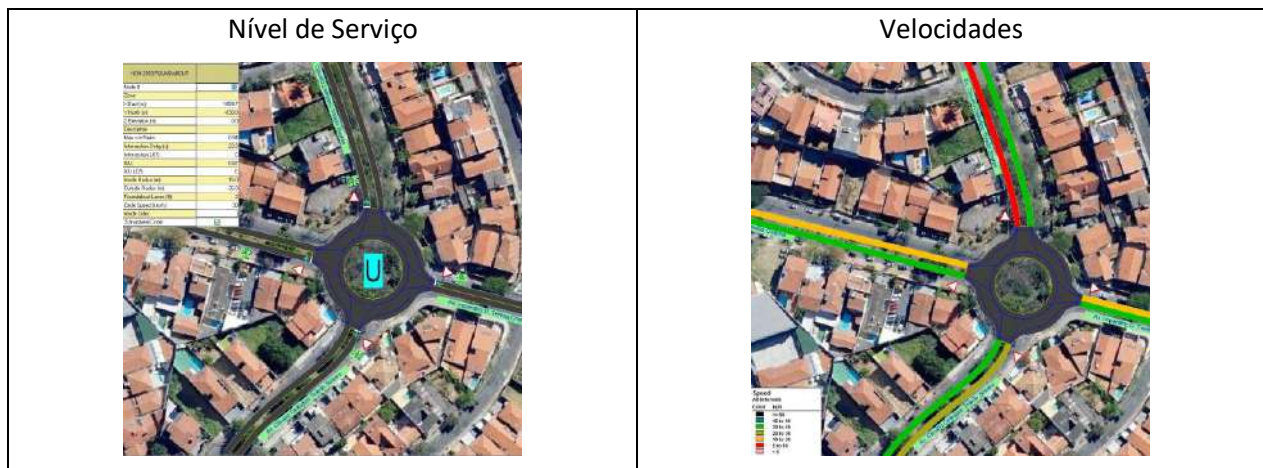


Figura 114 - Rotatória Av. Imperatriz D. Tereza Cristina x Av. Claudio Celestino Soares - tarde



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Abaixo segue figuras resumo contendo o nível de serviço e a relação V/C da situação atual das vias.



Figura 115 - VHP manhã, NS e V/C - ano 2016

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Figura 116- VHP almoço, NS e V/C - ano 2016

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Figura 117 - VHP tarde, NS e V/C - ano 2016

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B. Situação com o empreendimento

b. Previsão da demanda futura

Uso do Solo: Shopping Center

➔ CET

Trata-se do Boletim Técnico 46 da CET – SP. Neste modelo foram utilizados os dados de 24 shoppings centers.

A variável para a geração de viagens é a Área Computável, sendo que, segundo o estudo, trata-se da área construída total menos as áreas de garagens, áticos e caixas d'água.

| Demanda de atração diária (8h às 24h) | Segunda a quinta | | Sexta | | Sábado | | Domingo | |
|---------------------------------------|-------------------------|--------|-------------------------|--------|-------------------------|--------|-------------------------|--------|
| Demanda de atração diária (8h às 24h) | 0,092 x Área computável | | 0,105 x Área computável | | 0,147 x Área computável | | 0,114 x Área computável | |
| Carregamento viário | | | | | | | | |
| dia | Segunda a quinta | | Sexta | | Sábado | | Domingo | |
| hora | entrando | saindo | entrando | saindo | entrando | saindo | entrando | saindo |
| 08h-09h | 2,3% | 0,6% | 2,3% | 0,7% | 1,0% | 0,4% | 0,7% | 0,3% |
| 09h-10h | 3,6% | 1,1% | 3,5% | 1,1% | 2,7% | 1,0% | 1,5% | 0,8% |
| 10h-11h | 5,8% | 2,6% | 5,9% | 2,6% | 5,6% | 2,3% | 2,8% | 1,6% |
| 11h-12h | 7,1% | 4,5% | 6,8% | 4,5% | 7,1% | 4,2% | 4,9% | 2,7% |
| 12h-13h | 10,5% | 5,8% | 10,6% | 5,8% | 8,6% | 5,6% | 8,7% | 3,6% |
| 13h-14h | 9,8% | 8,5% | 9,8% | 8,7% | 9,7% | 6,8% | 12,4% | 5,1% |
| 14h-15h | 8,9% | 9,0% | 8,5% | 9,4% | 9,8% | 8,0% | 13,2% | 8,0% |
| 15h-16h | 8,5% | 8,4% | 8,1% | 8,3% | 9,3% | 9,6% | 12,4% | 11,5% |
| 16h-17h | 7,6% | 8,7% | 7,4% | 8,4% | 9,1% | 9,6% | 12,0% | 12,2% |
| 17h-18h | 7,6% | 8,3% | 7,5% | 8,0% | 8,8% | 9,5% | 10,8% | 12,0% |
| 18h-19h | 9,0% | 8,3% | 8,8% | 8,0% | 8,8% | 9,4% | 11,3% | 12,3% |
| 19h-20h | 9,9% | 8,8% | 10,1% | 8,6% | 9,1% | 8,7% | 9,4% | 11,9% |
| 20h-21h | 8,6% | 9,9% | 9,9% | 9,8% | 8,9% | 8,8% | 5,2% | 12,6% |
| 21h-22h | 3,8% | 9,8% | 5,7% | 10,0% | 5,2% | 9,3% | 2,6% | 8,3% |
| 22h-23h | 0,9% | 7,7% | 1,7% | 9,7% | 1,7% | 9,1% | 0,7% | 4,1% |
| 23h-24h | 0,2% | 2,3% | 0,9% | 4,1% | 0,8% | 4,5% | 0,3% | 2,6% |



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Utilizando os dados recebidos, considerou-se a área computável de 97.433m², portanto:

| Área Computável | 97433 | | | | | | | |
|---------------------------------------|-------------------------|--------|-------------------------|--------|-------------------------|--------|-------------------------|--------|
| Demanda de atração diária (8h às 24h) | Segunda a quinta | | Sexta | | Sábado | | Domingo | |
| Demanda de atração diária (8h às 24h) | 0,092 x Área computável | | 0,105 x Área computável | | 0,147 x Área computável | | 0,114 x Área computável | |
| | 8964 | | 10230 | | 14323 | | 11107 | |
| Carregamento viário | Segunda a quinta | | Sexta | | Sábado | | Domingo | |
| dia | Segunda a quinta | | Sexta | | Sábado | | Domingo | |
| hora | entrando | saindo | entrando | saindo | entrando | saindo | entrando | saindo |
| 08h-09h | 206 | 54 | 235 | 72 | 143 | 57 | 78 | 33 |
| 09h-10h | 323 | 99 | 358 | 113 | 387 | 143 | 167 | 89 |
| 10h-11h | 520 | 233 | 604 | 266 | 802 | 329 | 311 | 178 |
| 11h-12h | 636 | 403 | 696 | 460 | 1017 | 602 | 544 | 300 |
| 12h-13h | 941 | 520 | 1084 | 593 | 1232 | 802 | 966 | 400 |
| 13h-14h | 878 | 762 | 1003 | 890 | 1389 | 974 | 1377 | 566 |
| 14h-15h | 798 | 807 | 870 | 962 | 1404 | 1146 | 1466 | 889 |
| 15h-16h | 762 | 753 | 829 | 849 | 1332 | 1375 | 1377 | 1277 |
| 16h-17h | 681 | 780 | 757 | 859 | 1303 | 1375 | 1333 | 1355 |
| 17h-18h | 681 | 744 | 767 | 818 | 1260 | 1361 | 1200 | 1333 |
| 18h-19h | 807 | 744 | 900 | 818 | 1260 | 1346 | 1255 | 1366 |
| 19h-20h | 887 | 789 | 1033 | 880 | 1303 | 1246 | 1044 | 1322 |
| 20h-21h | 771 | 887 | 1013 | 1003 | 1275 | 1260 | 578 | 1400 |
| 21h-22h | 341 | 878 | 583 | 1023 | 745 | 1332 | 289 | 922 |
| 22h-23h | 81 | 690 | 174 | 992 | 243 | 1303 | 78 | 455 |
| 23h-24h | 18 | 206 | 92 | 419 | 115 | 645 | 33 | 289 |

Por questões de reserva técnica, adotou-se a volumetria do pico da manhã das 07:00 e 08:00 igual ao volume das 08:00 às 09:00.

| Shopping | manhã | entrando | 60% | 206 |
|----------|-------|----------|-----|-----|
| | | saindo | 40% | 54 |
| | tarde | entrando | 54% | 807 |
| | | saindo | 46% | 744 |

Para a divisão modal de pedestres nos modos a pé e por transporte coletivo empregaremos a divisão proposta por Goldner em seu livro “Estudo de polos geradores de tráfego e de seus impactos nos sistemas viários e de transportes”. (1994 apud PORTUGAL;GOLDNER, p. 181, 2003). Abaixo temos um extrato da pesquisa, considerando apenas os dados dos modos a pé e por transporte coletivo e desprezando as amostras que não apresentaram estes valores individualizados ou não fornecidos e aquelas onde a porcentagem de viagens por automóvel foi maior que 50%, evidenciando a característica de localização periférica, o que não condiz com a realidade do edifício em análise.

| Shopping | % ônibus | % à pé | Soma |
|------------|----------|--------|------|
| 2 | 70 | 5 | 75 |
| 4 | 30 | 20 | 50 |
| 5 | 33,2 | 8,3 | 41,5 |
| 10 | 55 | 0 | 55 |
| 11 | 52,9 | 13,6 | 66,5 |
| 12 | 53 | 2,2 | 55,2 |
| Média | 49 | 8,2 | 57,2 |
| % relativa | 85,7% | 14,3% | 100% |



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Aplicando os valores da porcentagem relativa à proporção dos volumes de chegada e saída de pedestres versus autos ao volume na hora de pico da tarde do empreendimento e considerando que nos demais períodos de análise se mantém, temos o seguinte quadro de viagens geradas:

| | | |
|----------------------------|-----------------|------------|
| modo a pé | | |
| manhã | entrando | 29 |
| | saindo | 8 |
| tarde | entrando | 115 |
| | saindo | 106 |
| transporte coletivo | | |
| manhã | entrando | 177 |
| | saindo | 46 |
| tarde | entrando | 692 |
| | saindo | 638 |



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Uso do solo: Torre de escritórios

→ CET/SP

A CET-SP desenvolveu modelos de atração de viagens para prédio de escritórios, conforme descrito em seu Boletim Técnico 36. A variável considera a área construída computável e a acessibilidade do entorno do empreendimento.

Com base na área construída computável, para o dia útil para $A_c \geq 28.800 \text{m}^2$

A área total computável por torre é de $34.500,0 \text{m}^2$, portanto, $69.000,00 \text{m}^2$ para este uso.

$$V = A_c / 22$$

$$V = 69.000 / 22$$

$$V = 3137 \text{ viagens/dia}$$

Em relação a divisão modal, utilizou-se o relatório da síntese dos resultados da ODRMC 2011, excluídas as viagens que têm a residência como motivo no destino, por tratar mais fidedignamente da região em estudo. Nesta distribuição o motivo trabalho é o que mais se destaca, com 45,5% das viagens, seguido pelo estudo, com 21,2%. Os dois motivos juntos correspondem a 66,7% do total dos deslocamentos.

| Mot Destino | Total |
|-------------------------------------|------------------|
| Almoço | 99.901 |
| Assuntos Pessoais | 172.895 |
| Compras | 104.874 |
| Estudo (Outros) | 20.478 |
| Estudo (Regular) | 546.437 |
| Lazer | 64.327 |
| Outros | 88.177 |
| Saúde | 90.526 |
| Trabalho | 1.173.824 |
| Transportar passag. para a escola | 186.204 |
| Transportar passag. para o trabalho | 33.470 |
| Total Geral | 2.581.114 |



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Apresentada em % do total:

| Mot Destino | Total |
|-------------------------------------|----------------|
| Almoço | 3,87% |
| Assuntos Pessoais | 6,70% |
| Compras | 4,06% |
| Estudo (Outros) | 0,79% |
| Estudo (Regular) | 21,17% |
| Lazer | 2,49% |
| Outros | 3,42% |
| Saúde | 3,51% |
| Trabalho | 45,48% |
| Transportar passag. para a escola | 7,21% |
| Transportar passag. para o trabalho | 1,30% |
| Total Geral | 100,00% |

A estratificação das viagens pelos motivos acima e modos respectivos foi obtida através do banco de dados da OD domiciliar 2011 da RMC e compilada conforme tabela abaixo:

| Mot Destino | A pé | Bicicleta | Caminhão | Condutor de Auto | Motocicleta | Ônibus Executivo | Ônibus Intermunicipal | Ônibus Municipal | Outros | Passag. Auto | Taxi | Transp escolar | Transp Fretado | Total Geral |
|-------------------------------------|----------------|---------------|--------------|------------------|----------------|------------------|-----------------------|------------------|--------------|----------------|--------------|----------------|----------------|------------------|
| Almoço | 33.972 | 4.081 | 214 | 42.991 | 9.797 | 77 | 485 | 2.241 | 111 | 5.574 | 154 | 204 | 99.901 | |
| Assuntos Pessoais | 31.772 | 3.033 | 130 | 59.874 | 5.424 | 360 | 5.581 | 37.945 | 205 | 27.343 | 704 | 167 | 356 | 172.895 |
| Compras | 32.907 | 745 | | 35.570 | 1.898 | 59 | 1.754 | 13.783 | | 18.008 | 152 | | | 104.874 |
| Estudo (Outros) | 3.255 | 723 | | 3.246 | 1.027 | | 1.104 | 5.447 | | 3.701 | | 1.758 | 217 | 20.478 |
| Estudo (Regular) | 241.002 | 5.340 | 65 | 20.652 | 5.516 | 598 | 6.819 | 45.070 | 935 | 82.659 | | 130.241 | 7.542 | 546.437 |
| Lazer | 15.315 | 1.664 | | 20.353 | 1.741 | 202 | 806 | 6.479 | | 16.808 | 697 | 59 | 204 | 64.327 |
| Outros | 20.923 | 1.353 | | 24.084 | 867 | 114 | 1.821 | 11.140 | 527 | 25.164 | 264 | 1.375 | 544 | 88.177 |
| Saúde | 13.852 | 581 | | 20.942 | 959 | 75 | 3.652 | 23.215 | 895 | 23.998 | 1.514 | | 842 | 90.526 |
| Trabalho | 173.179 | 36.873 | 5.341 | 389.533 | 94.392 | 3.210 | 66.580 | 191.427 | 1.275 | 85.206 | 274 | | 126.532 | 1.173.824 |
| Transportar passag. para a escola | 78.547 | 2.223 | 205 | 88.918 | 5.956 | 23 | 330 | 4.788 | 313 | 4.902 | | | | 186.204 |
| Transportar passag. para o trabalho | 652 | 337 | | 28.829 | 3.034 | | | 159 | | 303 | | | 156 | 33.470 |
| Total Geral | 645.377 | 56.951 | 5.955 | 734.994 | 130.613 | 4.717 | 88.931 | 341.693 | 4.262 | 293.667 | 3.604 | 133.754 | 136.597 | 2.581.114 |

Apresentado a mesma tabela em % do total tem-se:

| Mot Destino | coletivo | Individual | Não Motorizado | Outros | Total Geral |
|-------------------------------------|---------------|---------------|----------------|--------------|----------------|
| Almoço | 0,12% | 2,27% | | 1,47% | 3,87% |
| Assuntos Pessoais | 1,72% | 3,62% | | 1,35% | 6,70% |
| Compras | 0,60% | 2,16% | | 1,30% | 4,06% |
| Estudo (Outros) | 0,33% | 0,31% | | 0,15% | 0,79% |
| Estudo (Regular) | 7,37% | 4,22% | | 9,54% | 21,17% |
| Lazer | 0,30% | 1,53% | | 0,66% | 2,49% |
| Outros | 0,58% | 1,95% | | 0,86% | 3,42% |
| Saúde | 1,08% | 1,84% | | 0,56% | 3,51% |
| Trabalho | 15,02% | 22,27% | | 8,14% | 45,48% |
| Transportar passag. para a escola | 0,20% | 3,87% | | 3,13% | 7,21% |
| Transportar passag. para o trabalho | 0,01% | 1,25% | | 0,04% | 1,30% |
| Total Geral | 27,34% | 45,28% | 27,21% | 0,17% | 100,00% |

Considerando que o uso do solo de escritórios atrai viagens no pico da manhã com os motivos de assuntos pessoais, saúde, trabalho e outros, tem-se:

| Mot Destino | coletivo | Individual | Não Motorizado | Outros | Total Geral |
|--------------------|---------------|---------------|----------------|--------------|----------------|
| Assuntos Pessoais | 2,91% | 6,13% | 2,28% | 0,01% | 11,33% |
| Outros | 0,98% | 3,30% | 1,46% | 0,03% | 5,78% |
| Saúde | 1,82% | 3,11% | 0,95% | 0,06% | 5,93% |
| Trabalho | 25,42% | 37,68% | 13,77% | 0,08% | 76,95% |
| Total Geral | 31,13% | 50,22% | 18,46% | 0,19% | 100,00% |

- Viagens motorizadas modo coletivo = $3137 \times 0,3113 = 977$ viagens/dia

- Viagens motorizadas modo individual = $3137 \times 0,5022 = 1.576$ viagens/dia



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

- Viagens não motorizadas = $3137 \times 0,1846 = 579$ viagens/dia

A participação do modo automóvel dentro das viagens motorizadas individuais pelos motivos acima foi obtida através do banco de dados da OD domiciliar 2011 da RMC e compilada conforme tabela abaixo:

| Mot Destino | coletivo | | | | | Individual | | | | | Não Motorizado | | | Outros | Total Geral |
|--------------------|------------------|-----------------------|------------------|----------------|----------------|--------------|------------------|--------------|---------------|--------------|----------------|--------------|--------------|----------------|-------------|
| | Ônibus Executivo | Ônibus Intermunicipal | Ônibus Municipal | Transp escolar | Transp Fretado | Caminhão | Condutor de Auto | Motocicleta | Passag. Auto | Taxi | A pé | Bicicleta | | | |
| Assuntos Pessoais | 0,02% | 0,37% | 2,49% | 0,01% | 0,02% | 0,01% | 3,93% | 0,36% | 1,79% | 0,05% | 2,08% | 0,20% | 0,01% | 11,33% | |
| Outros | 0,01% | 0,12% | 0,73% | 0,09% | 0,04% | 0,00% | 1,58% | 0,06% | 1,65% | 0,02% | 1,37% | 0,09% | 0,03% | 5,78% | |
| Saúde | 0,00% | 0,24% | 1,52% | 0,00% | 0,06% | 0,00% | 1,37% | 0,06% | 1,57% | 0,10% | 0,91% | 0,04% | 0,06% | 5,93% | |
| Trabalho | 0,21% | 4,36% | 12,55% | 0,00% | 8,29% | 0,35% | 25,54% | 6,19% | 5,59% | 0,02% | 11,35% | 2,42% | 0,08% | 76,95% | |
| Total Geral | 0,25% | 5,09% | 17,29% | 0,10% | 8,41% | 0,36% | 32,41% | 6,66% | 10,60% | 0,18% | 15,72% | 2,74% | 0,19% | 100,00% | |

-Viagens em autos = $3137 \times 0,3241 = 1017$ autos/dia

Em relação as viagens geradas na hora-pico da manhã e tarde, o referido estudo sugere a aplicação da seguinte equação:

$$Vp = (VaxFp) / 100$$

Onde:

Vp = viagens na hora-pico

Va = viagens de automóveis atraídas por dia

Fp = fator de hora-pico

O fator de hora-pico sugerido no estudo da CET é 70% para a hora-pico da manhã. Assim sendo, temos os seguintes volumes:

$$Vp = (1000 \times 0,70) / 100$$

$$Vp = 712 \text{ autos/pico}$$

Considerou-se que o pico da tarde teria a mesmo fator de hora pico da manhã por questões de segurança.

Afim de expressar com maior fidelidade a geração de viagens, adotar-se-á os seguintes valores para as viagens não abordadas no estudo eleito, considerando o percentual adotado para definição de entradas e saídas do empreendimento, com base nas equações do ITE/EUA para uso de solo 710 – prédio de escritórios em geral.

Em dia útil na hora pico entre 7:00 e 8:00hs

Distribuição Direcional: 89% entrando, 11% saindo

Em dia útil na hora pico entre 17:00 e 18:00hs

Distribuição Direcional: 17% entrando, 83% saindo

| USO ESCRITÓRIOS | manhã | entrando | 89% | 634 |
|-----------------|-------|----------|-----|-----|
| | | saindo | 11% | 78 |
| | tarde | entrando | 17% | 121 |
| | | saindo | 83% | 591 |

Considerou-se o fator de hora pico sugerido no estudo da CET de 70% para a hora-pico da manhã e tarde e também para o modo coletivo e de pedestres. Das 31,13% das viagens de modo coletivo, 22,38% utilizam de transporte coletivo municipal ou intermunicipal, resultando na distribuição abaixo:



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| | |
|---------------|---|
| 3137 | viagens/dia |
| 22,38% | coletivo municipal ou intermunicipal |
| 70% | no pico |
| 491 | viagens/hora |

| transporte coletivo | | | |
|----------------------------|-----------------|------------|------------|
| manhã | entrando | 89% | 437 |
| | saindo | 11% | 54 |
| tarde | entrando | 17% | 84 |
| | saindo | 83% | 408 |

O modo não motorizado pode ser subdividido em modo a pé e bicicleta. A participação do modo a pé é de 15,72% conforme tabela compilada, portanto:

| | |
|---------------|---------------------|
| 3137 | viagens/dia |
| 15,72% | a pé |
| 70% | no pico |
| 345 | viagens/hora |

| modo a pé | | | |
|------------------|-----------------|------------|------------|
| manhã | entrando | 89% | 307 |
| | saindo | 11% | 38 |
| tarde | entrando | 17% | 59 |
| | saindo | 83% | 287 |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Uso do Solo: Residencial

Segundo a tabela do IBGE de classe social por faixa de renda.

Conforme o Censo 2010 – IBGE de Campinas tem-se:

- Taxa de habitantes por domicílio permanente

População residente= 1.080.113

Domicílios particulares ocupados = 348.268

Taxa de habitantes por domicílio = $1080113/348268 = 3,10$

- % de ocupação dos domicílios

Domicílios particulares não ocupados = 39.161

% de ocupação dos domicílios = 88,75%

Resultando como população permanente da área residencial do empreendimento:

- População permanente = 1008 domicílios x 0,8875 x 3,10 hab/dom = 2.774 habitantes

Adiciona-se a população permanente mais 6 zeladores, sendo um por torre.

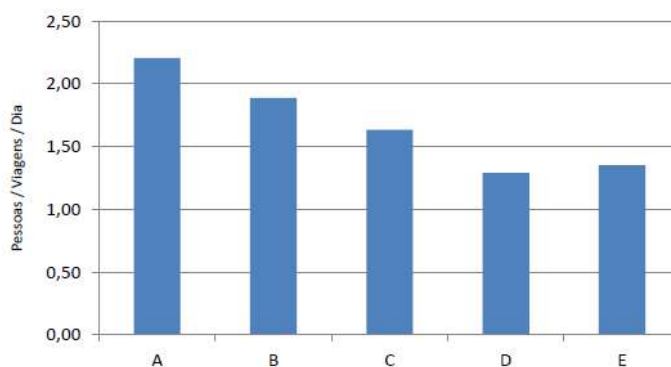
A População flutuante é estimada como os funcionários do condomínio e os prestadores de serviço como diaristas, encanadores, chaveiros, entre outros. Os funcionários foram estimados em 2 por torre.

As diaristas foram estimadas uma razão de 1 para cada 10 apartamentos. Os demais prestadores de serviço, não geram viagens nos horários de pico do empreendimento.

Portanto: população total estimada em 2.893 pessoas.

Para a análise do perfil de mobilidade da população foi utilizado os dados da pesquisa de Origem Destino de Campinas – 2011 pois possui o perfil da região.

| Classes Econômicas | Mobilidade |
|--------------------|-------------|
| A | 2,21 |
| B | 1,89 |
| C | 1,63 |
| D | 1,29 |
| E | 1,35 |
| Total | 1,73 |



Fonte: Pesquisa Origem-Destino 2011 Região Metropolitana de Campinas – junho 2012 Síntese dos Resultados.

A faixa de renda dos moradores dos condomínios residenciais estimou-se como sendo a média das classes A e B.

Portanto índice de mobilidade médio entre as classes A e B é de 2,05.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Dessa forma o total de viagens diárias da população residente é:

- Viagens diárias população residente = $2.893 \times 2,05 = 5.931$ viagens/dia

Cuja estratificação pelos modos motorizados e não motorizados (ODRMC-2011), é:

| Classe | Tipo | A | B | C | D | E |
|--------------------|------------|---------------|---------------|---------------|---------------|---------------|
| Motorizado | coletivo | 14,0% | 23,8% | 34,1% | 36,0% | 28,4% |
| | Individual | 78,8% | 57,2% | 31,3% | 15,4% | 12,4% |
| Não Motorizado | | 7,2% | 18,9% | 34,4% | 48,2% | 59,3% |
| Outros | | 0,0% | 0,1% | 0,2% | 0,4% | 0,0% |
| Total geral | | 100,0% | 100,0% | 100,0% | 100,0% | 100,0% |



Média das classes A e B:

| Classe | Tipo | A | B | Média A/B |
|-----------------------|----------------|---------------|---------------|---------------|
| Motorizado | coletivo | 14,0% | 23,8% | 18,9% |
| | Individual | 78,8% | 57,2% | 68,0% |
| Não Motorizado | Não Motorizado | 7,2% | 18,9% | 13,1% |
| Outros | Outros | 0,0% | 0,1% | 0,1% |
| Total Geral | | 100,0% | 100,0% | 100,0% |

- Viagens motorizadas modo coletivo = $5.931 \times 0,189 = 1.121$ viagens/dia

- Viagens motorizadas modo individual = $5.931 \times 0,68 = 4.033$ viagens/dia

- Viagens não motorizadas = $5.931 \times 0,131 = 777$ viagens/dia

Considerando-se o automóvel como o veículo predominante no impacto e saturação viária, e considerando ainda a porcentagem de motocicletas, conforme perfil de mobilidade para a classe A, tem-se:

| Tipo | Modo Principal | A | B | Média A/B |
|-----------------------|-----------------------|---|----------------|----------------|
| coletivo | Ônibus Executivo | | 0,39% | 0,29% |
| | Ônibus Intermunicipal | | 1,05% | 3,34% |
| | Ônibus Municipal | | 3,79% | 11,73% |
| | Transp escolar | | 5,74% | 5,52% |
| | Transp Fretado | | 3,88% | 5,43% |
| Individual | Caminhão | | 0,00% | 0,19% |
| | Condutor de Auto | | 60,02% | 37,57% |
| | Motocicleta | | 0,89% | 4,41% |
| | Passag. Auto | | 17,08% | 12,99% |
| | Taxi | | 0,04% | 0,16% |
| Não Motorizado | A pé | | 6,94% | 17,05% |
| | Bicicleta | | 0,17% | 1,20% |
| Outros | Outros | | 0,00% | 0,11% |
| Total Geral | | | 100,00% | 100,00% |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Viagens em autos (somadas das viagens dos condutores de auto, passageiros de auto e taxi)

- Viagens em autos = $5.931 \times 0,6394 = 3.793$ viagens/dia

- Viagens em motos = $5.931 \times 0,0265 = 158$ viagens/dia

A taxa de ocupação foi obtida através da taxa de ocupação média por tipo de veículos da pesquisa de Cordon Line da ODRMC 2011.

PESQUISA CORDON LINE

| POSTO | Sentido | Auto | Moto | Carga | Total geral |
|-------|----------|------|------|-------|-------------|
| 1 | Entrando | 1,47 | 1,16 | 1,36 | 1,39 |
| | Saindo | 1,46 | 1,11 | 1,43 | 1,39 |
| | Total | 1,46 | 1,14 | 1,4 | 1,39 |
| 2 | Entrando | 1,46 | 1,2 | 1,42 | 1,42 |
| | Saindo | 1,39 | 1,06 | 1,45 | 1,38 |
| | Total | 1,42 | 1,13 | 1,43 | 1,39 |
| 3 | Entrando | 1,54 | 1,15 | 1,29 | 1,42 |
| | Saindo | 1,69 | 1,15 | 1,36 | 1,51 |
| | Total | 1,62 | 1,15 | 1,33 | 1,47 |
| 4 | Entrando | 1,3 | 1,08 | 1,56 | 1,27 |
| | Saindo | 1,43 | 1,04 | 1,54 | 1,34 |
| | Total | 1,38 | 1,06 | 1,55 | 1,3 |
| 5 | Entrando | 1,65 | 1,2 | 1,34 | 1,49 |
| | Saindo | 1,6 | 1,09 | 1,41 | 1,47 |
| | Total | 1,62 | 1,15 | 1,37 | 1,48 |
| 6 | Entrando | 1,55 | 1,21 | 1,57 | 1,45 |
| | Saindo | 1,47 | 1,18 | 1,38 | 1,35 |
| | Total | 1,51 | 1,19 | 1,46 | 1,4 |
| 7 | Entrando | 1,37 | 1,13 | 1,36 | 1,3 |
| | Saindo | 1,61 | 1,11 | 1,42 | 1,4 |
| | Total | 1,49 | 1,12 | 1,39 | 1,36 |
| 8 | Entrando | 1,71 | 1,05 | 1,32 | 1,39 |
| | Saindo | 1,82 | 1,13 | 1,26 | 1,47 |
| | Total | 1,77 | 1,09 | 1,29 | 1,43 |
| 9 | Entrando | 1,53 | 1,06 | 1,36 | 1,38 |
| | Saindo | 1,55 | 1,08 | 1,44 | 1,41 |
| | Total | 1,54 | 1,07 | 1,39 | 1,39 |
| 10 | Entrando | 1,62 | 1,14 | 1,31 | 1,48 |
| | Saindo | 1,39 | 1,13 | 1,3 | 1,34 |
| | Total | 1,55 | 1,14 | 1,31 | 1,43 |

Taxa de Ocupação Média por tipo de veículos

| POSTO | Sentido | Auto | Moto | Carga | Total geral |
|-------------|----------|------|------|-------|-------------|
| 11 | Entrando | 1,61 | 1,06 | 1,48 | 1,43 |
| | Saindo | 1,6 | 1,04 | 1,46 | 1,46 |
| | Total | 1,6 | 1,05 | 1,47 | 1,44 |
| 12 | Entrando | 1,56 | 1,25 | 1,4 | 1,48 |
| | Saindo | 1,56 | 1,15 | 1,39 | 1,46 |
| | Total | 1,56 | 1,17 | 1,39 | 1,46 |
| 13 | Entrando | 1,51 | 1,18 | 1,52 | 1,44 |
| | Saindo | 1,53 | 1,2 | 1,42 | 1,43 |
| | Total | 1,52 | 1,19 | 1,47 | 1,44 |
| 14 | Entrando | 1,59 | 1,15 | 1,3 | 1,41 |
| | Saindo | 1,51 | 1,11 | 1,47 | 1,44 |
| | Total | 1,55 | 1,13 | 1,37 | 1,43 |
| 15 | Entrando | 1,51 | 1,05 | 1,45 | 1,45 |
| | Saindo | 1,41 | 1,11 | 1,78 | 1,46 |
| | Total | 1,46 | 1,09 | 1,6 | 1,45 |
| 16 | Entrando | 1,44 | 1,1 | 1,44 | 1,36 |
| | Saindo | 1,63 | 1,21 | 1,47 | 1,45 |
| | Total | 1,54 | 1,17 | 1,46 | 1,41 |
| 17 | Entrando | 1,44 | 1,13 | 1,57 | 1,39 |
| | Saindo | 1,4 | 1,13 | 1,52 | 1,36 |
| | Total | 1,42 | 1,13 | 1,54 | 1,37 |
| 18 | Entrando | 1,62 | 1,09 | 1,33 | 1,46 |
| | Saindo | 1,58 | 1,22 | 1,5 | 1,51 |
| | Total | 1,6 | 1,15 | 1,35 | 1,48 |
| 20 | Entrando | 1,58 | 1,18 | 1,35 | 1,42 |
| | Saindo | 1,53 | 1,18 | 1,47 | 1,45 |
| | Total | 1,55 | 1,18 | 1,41 | 1,43 |
| Total geral | | 1,53 | 1,12 | 1,42 | 1,41 |

Tendo-se como taxa de ocupação dos autos igual a 1,53 pessoas/auto, obtendo-se o total de autos:

- Autos = $3.793 : 1,53 = 2.479$ autos/dia

A concentração na hora pico foi obtida através do banco de dados da OD domiciliar 2011 da RMC e compilada conforme tabela abaixo:



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| Hora | % do dia |
|----------------|----------------|
| 00:00 às 00:59 | 0,27% |
| 01:00 às 01:59 | 0,08% |
| 02:00 às 02:59 | 0,07% |
| 03:00 às 03:59 | 0,13% |
| 04:00 às 04:59 | 0,60% |
| 05:00 às 05:59 | 2,48% |
| 06:00 às 06:59 | 11,89% |
| 07:00 às 07:59 | 10,75% |
| 08:00 às 08:59 | 4,15% |
| 09:00 às 09:59 | 2,53% |
| 10:00 às 10:59 | 2,58% |
| 11:00 às 11:59 | 4,76% |
| 12:00 às 12:59 | 11,65% |
| 13:00 às 13:59 | 4,59% |
| 14:00 às 14:59 | 3,46% |
| 15:00 às 15:59 | 3,07% |
| 16:00 às 16:59 | 5,32% |
| 17:00 às 17:59 | 12,16% |
| 18:00 às 18:59 | 9,65% |
| 19:00 às 19:59 | 2,90% |
| 20:00 às 20:59 | 1,40% |
| 21:00 às 21:59 | 1,48% |
| 22:00 às 22:59 | 2,79% |
| 23:00 às 23:59 | 1,24% |
| Total | 100,00% |

- Volume de autos (07:00 às 08:00) = 2.479 x 0,1075 = 267 autos/hora

- Volume de autos (17:00 às 18:00) = 2.479 x 0,1216 = 302 autos/ hora

Como a metodologia acima não especifica a distribuição direcional utilizou-se o Método ITE para Uso Residencial 270 – EMPREENDIMENTO RESIDENCIAL PLANEJADO (Os empreendimentos planejados residenciais, para os propósitos de geração de viagens, são definidos como abrangendo qualquer combinação de usos do solo residenciais e também podem conter serviços de apoio, tais como serviços limitados de varejo e áreas de recreação.)

Em: Dia útil, na Hora de Pico do Tráfego da Via Adjacente, Uma Hora entre 7:00 e 9:00 horas.

Distribuição Direcional: 25% entrando, 75% saindo

Em: Dia útil, na Hora de Pico do Tráfego da Via Adjacente, Uma Hora entre 16:00 e 18:00 horas.

Distribuição Direcional: 61% entrando, 39% saindo

Portanto o volume de autos para o uso residencial será:

| USO RESIDENCIAL | manhã | entrando | 25% | 67 |
|------------------------|--------------|-----------------|------------|------------|
| | | saindo | 75% | 200 |
| | tarde | entrando | 61% | 184 |
| | | saindo | 39% | 118 |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Para o uso residencial, do total de viagens geradas/dia, 9,96% utilizam-se de transporte público intermunicipal ou municipal e 11,99% utilizam o modo a pé. Considerando ainda a proporção de distribuição horária de Campinas e distribuição direcional das viagens, tem-se:

| transporte coletivo | | | |
|----------------------------|-----------------|------------|-----------|
| manhã | entrando | 25% | 16 |
| | saindo | 75% | 48 |
| tarde | entrando | 61% | 44 |
| | saindo | 39% | 28 |

| modo a pé | | | |
|------------------|-----------------|------------|-----------|
| manhã | entrando | 25% | 19 |
| | saindo | 75% | 57 |
| tarde | entrando | 61% | 53 |
| | saindo | 39% | 34 |



Uso do solo: Hotel

Utilizou-se a metodologia americana do ITE para o uso do solo 310 – HOTEL (Para os estudos de geração de viagens, define-se um hotel como local de alojamento que fornece acomodações para dormir, restaurantes, saletas para coquetéis, salões para encontros e banquetes ou instalações para convenções, lojas e serviços. Alguns dos locais incluídos nessa categoria de uso do solo são na verdade grandes motéis, que oferecem os recursos de um hotel assinalados acima. Os hotéis pesquisados estavam todos locados fora de áreas centrais, principalmente em áreas suburbanas, variando em tamanho de 100 a aproximadamente 2.000 quartos) onde a variável é o número de quartos ocupados. Para a determinação do número de quartos ocupados utilizou-se o informativo mensal que revela e analisa os resultados estatísticos de hotelaria no país apurados pela FOHB – Fórum de Operadores Hoteleiros do Brasil, edição 100ª do mês de novembro de 2015, por se tratar de um mês típico do ano. Este estudo mostra que para as principais cidades do Estado de São Paulo a taxa de ocupação foi de 66,42%.

Portanto: Quartos ocupados = $500 * 0,6642 = 333$ quartos ocupados.

Média dos destinos veiculares versus: Quartos Ocupados

Em: Dia Útil

Número Médio de Quartos Ocupados: 333

T = Média dos Destinos Veiculares

X = Número de Quartos Ocupados

Equação da Curva Adaptada: $T = 8,802(X) - 59,208$ $R^2 = 0,98$

$T = 8,802(X) - 59,208$

$T = 8,802(333) - 59,208$

$T = 2872$ viagens/dia

Média dos destinos veiculares versus: Quartos Ocupados

Em dia útil na hora pico entre 7:00 e 8:00hs

Número de Quartos Ocupados: 333

Distribuição Direcional: 60% entrando, 40% saindo

T = Média dos Destinos Veiculares

X = Número de Quartos Ocupados

Equação da Curva Adaptada: $T = 0,785(X) - 30,549$ $R^2 = 0,73$

$T = 0,785(333) - 30,549$

$T = 231$ autos/hora



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Média dos destinos veiculares versus: Quartos Ocupados

Em dia útil na hora pico entre 17:00 e 18:00hs

Número de Quartos Ocupados: 333

Distribuição Direcional: 54% entrando, 46% saindo

T = Média dos Destinos Veiculares

X = Número de Quartos Ocupados

Equação da Curva Adaptada: $\ln(T) = 0,957 \ln(X) - 0,070$ $R^2 = 0,74$

$\ln(T) = 0,957 \ln(333) - 0,070$

T = 242 autos/hora

Portanto o volume de autos para o uso hotel será:

| | | | | |
|--------------|--------------|-----------------|------------|------------|
| Hotel | manhã | entrando | 60% | 139 |
| | | saindo | 40% | 92 |
| | tarde | entrando | 54% | 131 |
| | | saindo | 46% | 111 |

Utilizando os dados publicados no Fórum de operadores hoteleiros do Brasil de 2015 a média de funcionários por quarto é de 0,39. Considerando que 100% este contingente utiliza o transporte coletivo e que existem dois turnos de trabalho empregando 20% do efetivo a noite e 80% do efetivo de dia, temos a seguinte atração de viagens para este modal.

Portanto $500 * 0,39 = 195$ funcionários.

| | | |
|----------------------------|-----------------|------------|
| transporte coletivo | | |
| manhã | entrando | 144 |
| | saindo | 36 |
| tarde | entrando | 144 |
| | saindo | 36 |

Portanto as viagens pelo modo automóvel geradas por todos os usos de solo, nos picos da manhã e da tarde para as vias do entorno são:

| | | |
|--|-----------------|-------------|
| Total do empreendimento - automóvel | | |
| manhã | entrando | 1034 |
| | saindo | 406 |
| tarde | entrando | 1243 |
| | saindo | 1560 |

| | | |
|---|-----------------|-------------|
| Total do empreendimento - coletivo | | |
| manhã | entrando | 772 |
| | saindo | 187 |
| tarde | entrando | 981 |
| | saindo | 1119 |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| Total do empreendimento - a pé | | |
|--------------------------------|----------|-----|
| manhã | entrando | 353 |
| | saindo | 106 |
| tarde | entrando | 232 |
| | saindo | 427 |

c. Potencial de absorção de viagens internas do empreendimento

Considerando-se a magnitude do empreendimento, sua tipologia de múltiplo uso e inexistência de empreendimentos semelhantes já consolidados em Campinas, recorreu-se a seguinte formulação empírica para determinar o potencial de absorção de viagens internas:

- A matriz de origem/destino da ODRMC-2011, identificou como total de absorção de viagens internas por todos os motivos para a zona de tráfego 10, o equivalente a 24,31% do total de viagens geradas/atraídas por esta zona.

| ZONA_O | 010 | Total Geral |
|--------------------|---------------|----------------|
| 010 | 24,31% | 100,00% |
| Total Geral | 24,31% | 100,00% |

A estimativa de geração de viagens diárias do empreendimento, separadas pelos usos comercial e residencial, resultou na seguinte distribuição:

| | viagens/dia |
|-------------|-------------|
| shopping | 8964 |
| escritórios | 3137 |
| hotel | 2872 |
| residencial | 5931 |
| | viagens/dia |
| comercial | 14973 |
| residencial | 5931 |

| | viagens/dia | % do total |
|-------------|-------------|------------|
| comercial | 14973 | 71,6% |
| residencial | 5931 | 28,4% |

Admitindo-se a mesma equivalência com o total de absorção de viagens internas por todos os motivos para a zona 10, igual a 24,31%, aplicados para as viagens de uso comercial do empreendimento, igual a 71,6%, resulta no seguinte potencial de absorção de viagens internas do empreendimento:

Potencial de absorção interno = 24,31% x 71,6% = 17,41%

Portanto, as viagens a serem alocadas no sistema viário das vias de acesso serão as seguintes:



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| Total do empreendimento - 17,41% de absorção interna | | |
|---|-----------------|-------------|
| manhã | entrando | 863 |
| | saindo | 351 |
| tarde | entrando | 1027 |
| | saindo | 1292 |

| Shopping/escritórios/hotel | | |
|-----------------------------------|-----------------|-------------|
| manhã | entrando | 808 |
| | saindo | 186 |
| tarde | entrando | 874 |
| | saindo | 1194 |
| Residencial | | |
| manhã | entrando | 55 |
| | saindo | 165 |
| tarde | entrando | 152 |
| | saindo | 97 |

| Total do empreendimento - coletivo | | |
|---|-----------------|------------|
| manhã | entrando | 639 |
| | saindo | 152 |
| tarde | entrando | 795 |
| | saindo | 916 |

| Total do empreendimento - a pé | | |
|---------------------------------------|-----------------|------------|
| manhã | entrando | 294 |
| | saindo | 85 |
| tarde | entrando | 187 |
| | saindo | 352 |

d. Distribuição espacial das viagens geradas e alocação no sistema viário na área de influência

A espacialização das viagens é obtida através da vetorização das viagens considerando-se seus principais pares de origem e destino, realizadas por todos os modos (transporte motorizado individual e coletivo, e transporte não motorizado) e todos os motivos (trabalho, educação, compras, saúde, recreação e visitas, outros), dados esses obtidos através da Pesquisa de Origem e Destino da Região Metropolitana de Campinas (ODRMC-2011), sendo ao final executado o carregamento nas principais rotas viárias de acesso, cuja síntese é apresentada na sequência.

Segundo o zoneamento da Pesquisa ODRMC-2011 o empreendimento está localizado na Zona de tráfego 10.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Entende-se por viagem o deslocamento de uma pessoa, por um motivo específico, entre dois pontos determinados (origem e destino), utilizando para isso, um ou mais modos de transporte.

O índice de mobilidade é a relação entre o número de viagens e o número de habitantes de uma determinada área

- Produção total de viagens de Campinas

Segundo a pesquisa OD realizada em 2011, diariamente são realizadas na RMC um total de 4.746.347 viagens. Do total de viagens, 107.020 são viagens externas, com origem ou destino fora da RMC. Se excluídas essas viagens externas, o total de viagens cai para 4,64 milhões por dia e a mobilidade geral será de 1,69 viagens/pessoa/dia, para uma população de 2.750.124 habitantes.

- Vetorização das viagens

A vetorização das viagens metropolitanas na localização do empreendimento foi obtida através da ODRMC-2011, zona de tráfego 10, cuja tabela é apresentada na figura abaixo:



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| Soma de Fat Exp Pop | | | | |
|---------------------|--------|-------------|--------|-------|
| Município Or | ZONA_O | Município | ZONA_D | Total |
| Campinas | 010 | Campinas | 001 | 5.595 |
| | | | 002 | 1.919 |
| | | | 003 | 1.649 |
| | | | 004 | 344 |
| | | | 005 | 84 |
| | | | 006 | 376 |
| | | | 007 | 455 |
| | | | 008 | 884 |
| | | | 009 | 441 |
| | | | 010 | 7.129 |
| | | | 011 | 454 |
| | | | 012 | 229 |
| | | | 013 | 172 |
| | | | 014 | 137 |
| | | | 015 | 158 |
| | | | 016 | 224 |
| | | | 017 | 137 |
| | | | 018 | 325 |
| | | | 020 | 213 |
| | | | 021 | 836 |
| | | | 023 | 977 |
| | | | 024 | 155 |
| | | | 027 | 68 |
| | | | 028 | 231 |
| | | | 029 | 232 |
| | | | 030 | 68 |
| | | | 031 | 393 |
| | | | 032 | 63 |
| | | | 033 | 88 |
| | | | 036 | 88 |
| | | | 037 | 355 |
| | | | 038 | 168 |
| | | | 040 | 84 |
| | | | 044 | 88 |
| | | | 047 | 68 |
| | | | 048 | 413 |
| | | | 050 | 76 |
| | | | 051 | 88 |
| | | | 056 | 75 |
| | | | 057 | 172 |
| | | | 059 | 344 |
| | | | 060 | 84 |
| | | | 062 | 84 |
| | | | 066 | 333 |
| | | | 068 | 372 |
| | | Cosmópolis | 153 | 100 |
| | | Hortolândia | 103 | 172 |
| | | | 105 | 124 |
| | | | 107 | 68 |
| | | | 108 | 68 |
| | | Indaiatuba | 089 | 131 |
| | | | 094 | 84 |
| | | Jaguariúna | 156 | 88 |
| | | Jundiaí | 190 | 172 |
| | | Mogi Mirim | 637 | 84 |
| | | Paulínia | 141 | 84 |
| | | Santa Bárba | 119 | 131 |
| | | Sumaré | 109 | 88 |
| | | | 114 | 234 |
| | | Valinhos | 069 | 84 |
| | | | 071 | 438 |
| | | | 072 | 185 |
| | | | 073 | 68 |

Total Geral 29.330

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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

As viagens a serem geradas por todos os motivos e modos de transporte desta zona para os municípios vizinhos dá-se conforme tabela abaixo:

| Município Or | ZONA_O | Município Dest | Total | |
|--------------------|--------|-----------------------|--------------|---------------|
| Campinas | 010 | Campinas | 26927 | 91,8% |
| | | Cosmópolis | 100 | 0,3% |
| | | Hortolândia | 432 | 1,5% |
| | | Indaiatuba | 215 | 0,7% |
| | | Jaguariúna | 88 | 0,3% |
| | | Jundiaí | 172 | 0,6% |
| | | Mogi Mirim | 84 | 0,3% |
| | | Paulínia | 84 | 0,3% |
| | | Santa Bárbara d'Oeste | 131 | 0,4% |
| | | Sumaré | 322 | 1,1% |
| | | Valinhos | 775 | 2,6% |
| Total Geral | | | 29330 | 100,0% |

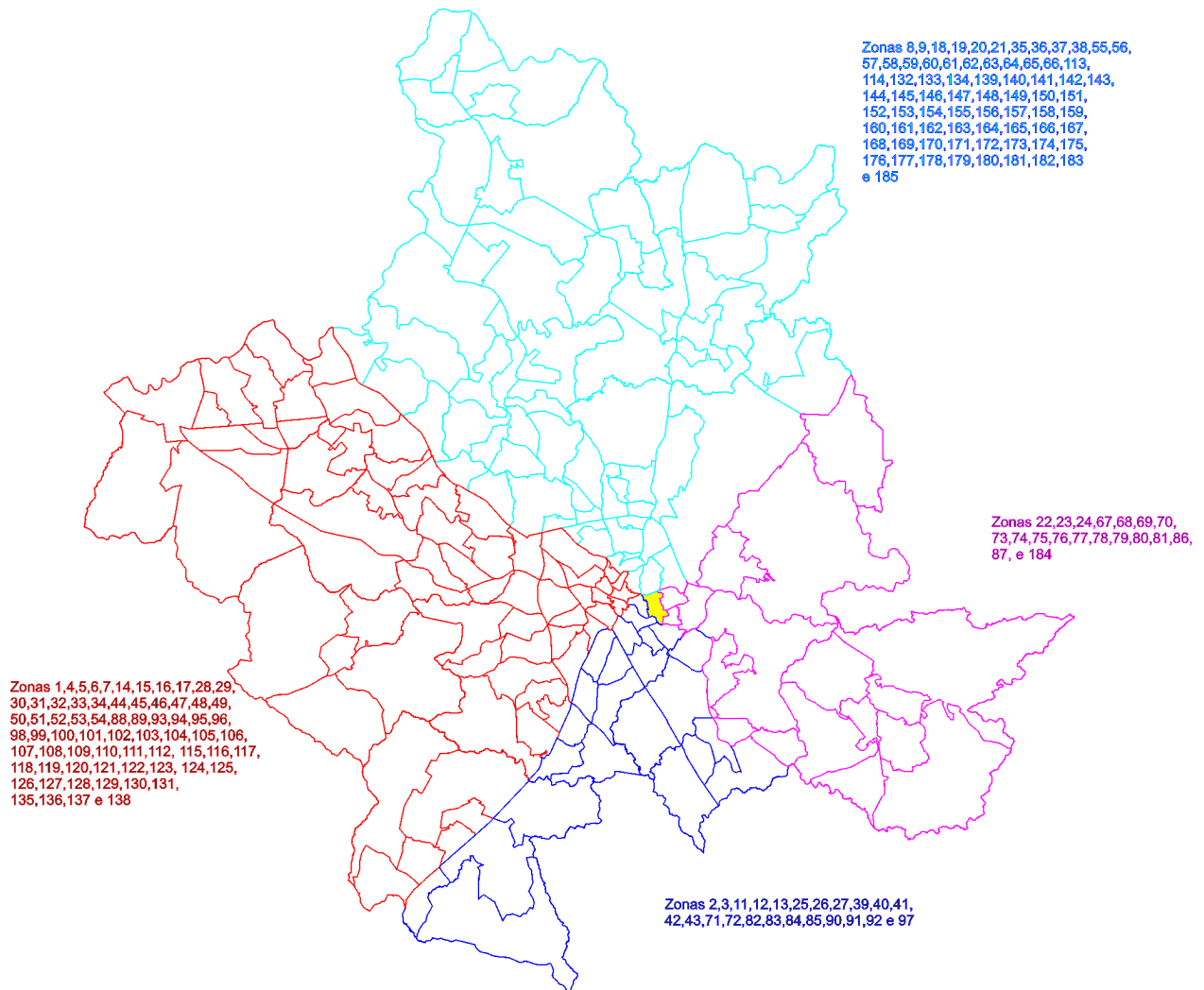
- Vetorização das viagens do empreendimento

As zonas de tráfego da Pesquisa ODRMC-2011 foram agrupadas considerando as suas localizações em relação a zona 10 de tráfego e as vias de acesso do empreendimento, conforme mostrado na figura abaixo:



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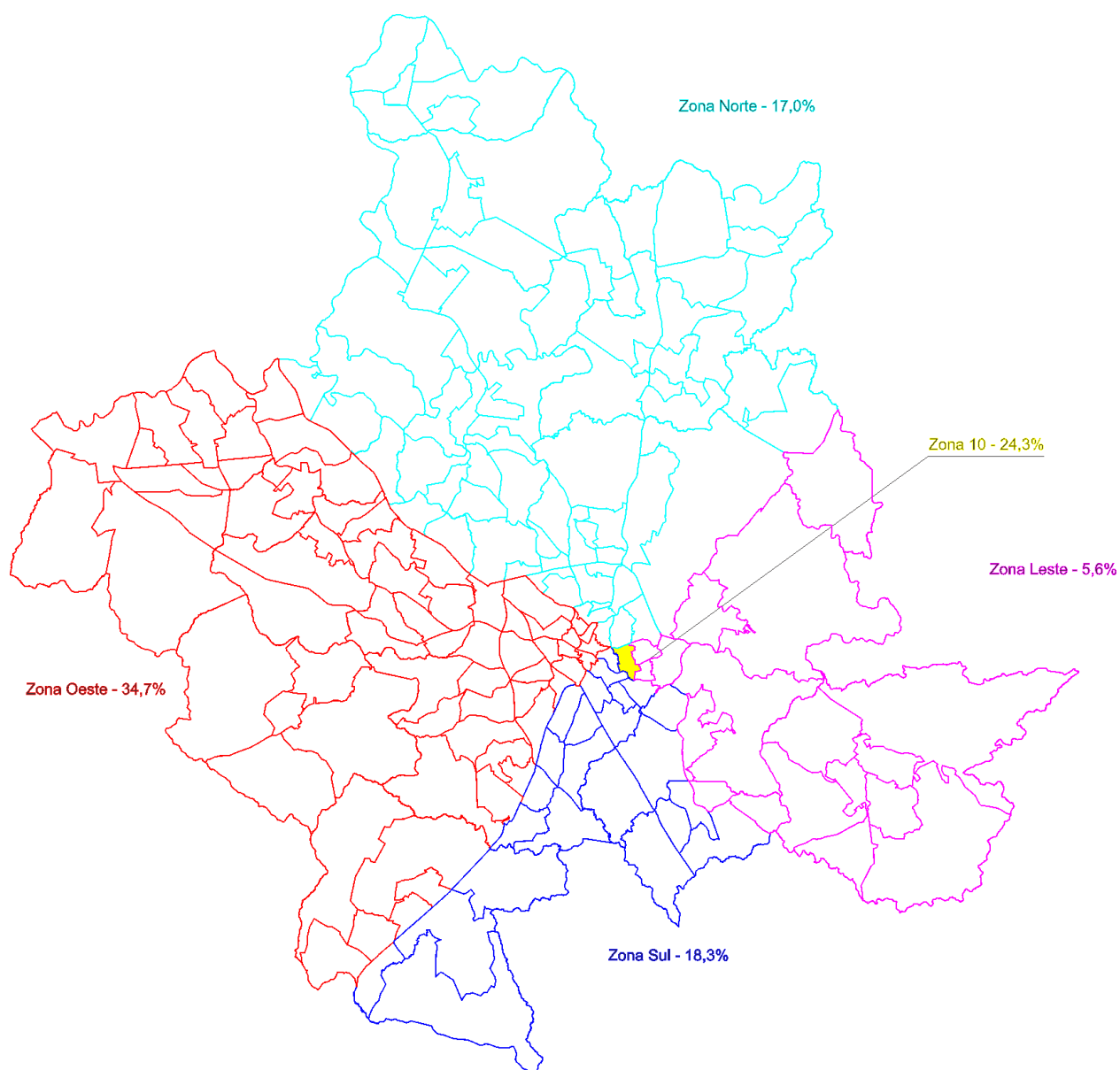
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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30



| Regiões | Total | % |
|--------------|---------------|---------------|
| Norte | 4.992 | 17,0% |
| Oeste | 10.184 | 34,7% |
| Leste | 1.656 | 5,6% |
| Sul | 5.369 | 18,3% |
| zona 10 | 7.129 | 24,3% |
| Total | 29.330 | 100,0% |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

- Alocação do tráfego gerado

Abaixo segue figura contendo posicionamento dos acessos dos veículos para o uso do solo Residencial



Figura 118- Residencial - entradas e saídas



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Abaixo segue figura contendo posicionamento dos acessos dos veículos para o uso do solo Shopping, Torre de Escritórios e Hotel

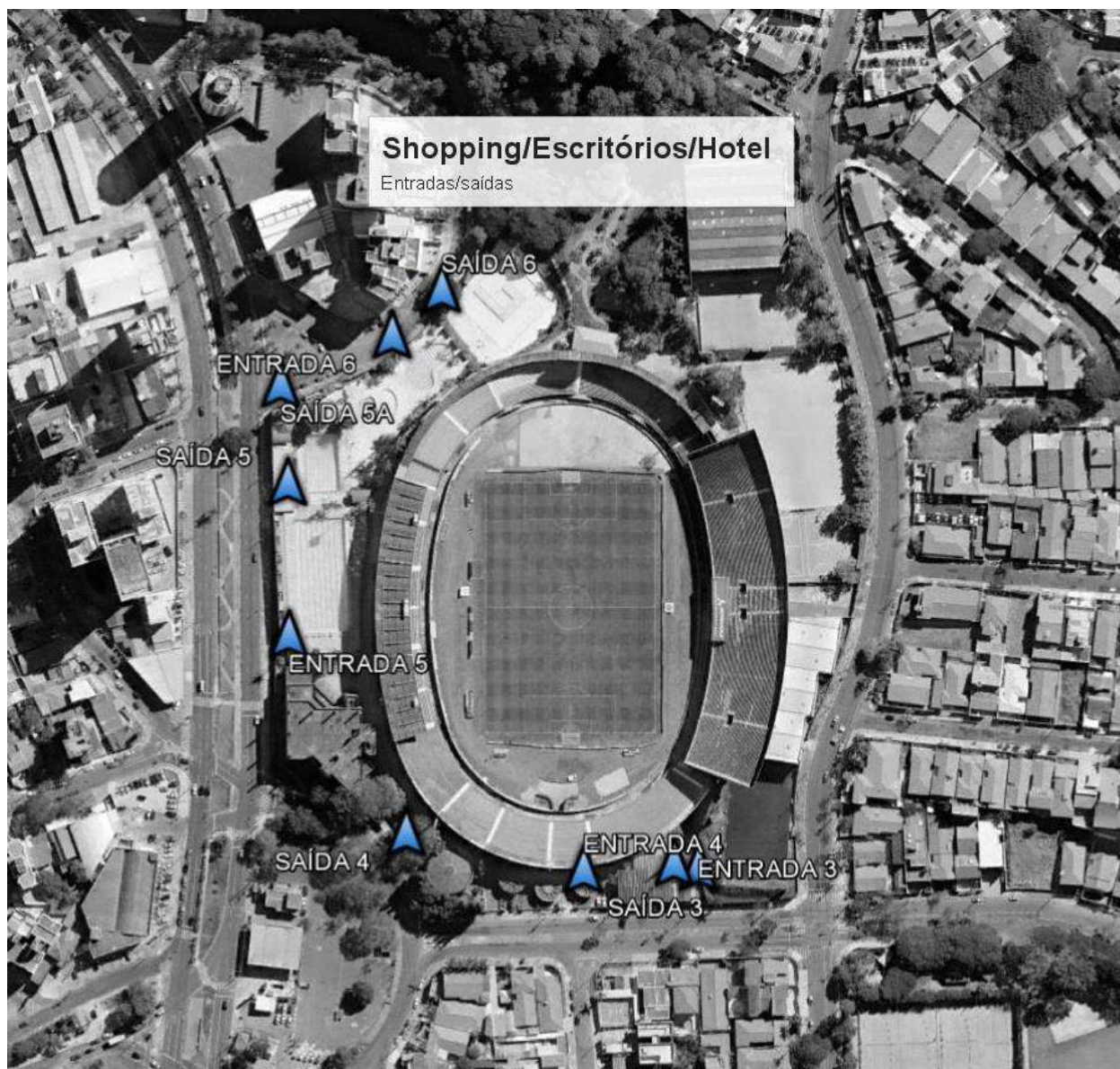


Figura 119- Shopping, escritórios e hotel - entradas e saídas

A partir da localização dos acessos e partindo também da premissa que há sempre maior intenção em realizar os deslocamentos pelas vias arteriais, determinou-se as rotas de saídas e chegadas do empreendimento para os diversos usos, sendo que os usos residenciais, possuem acessos distintos para seus deslocamentos e tiveram suas rotas determinadas diferentemente dos demais usos.



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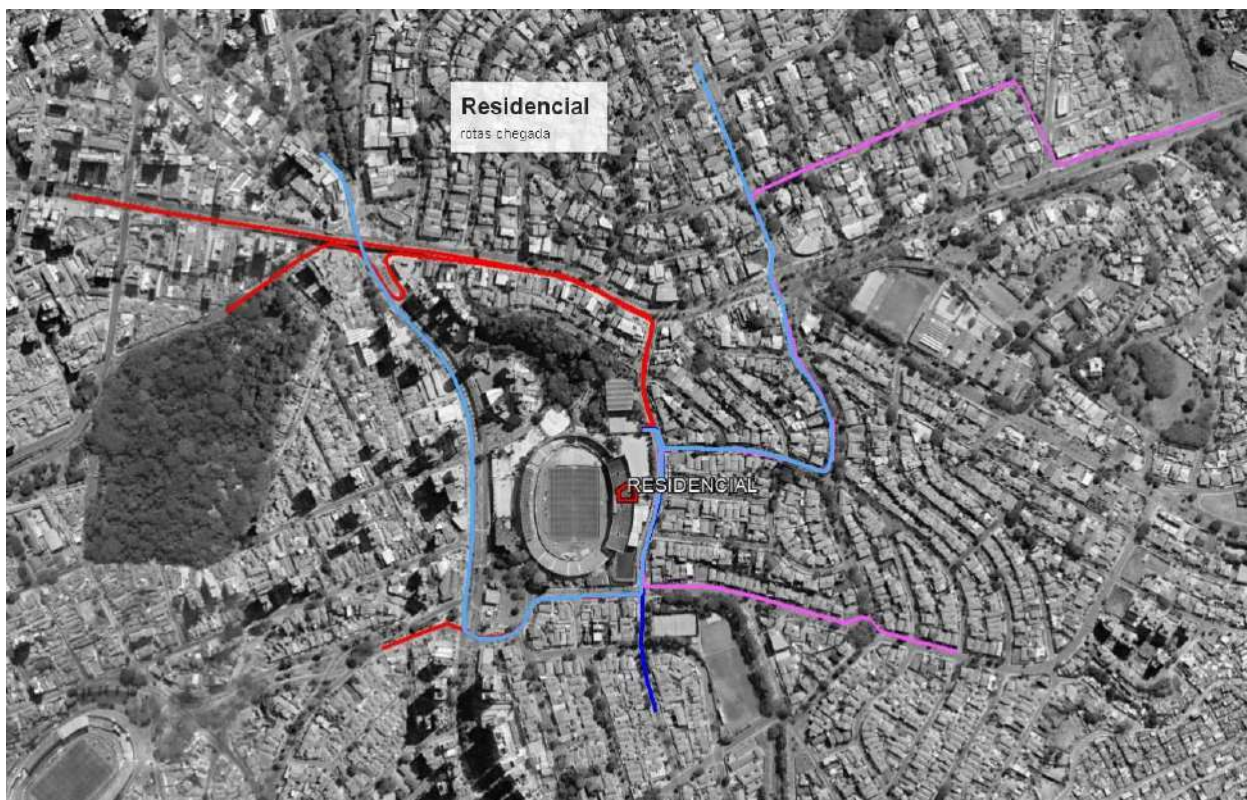


Figura 120 - Rotas de chegada – Residencial

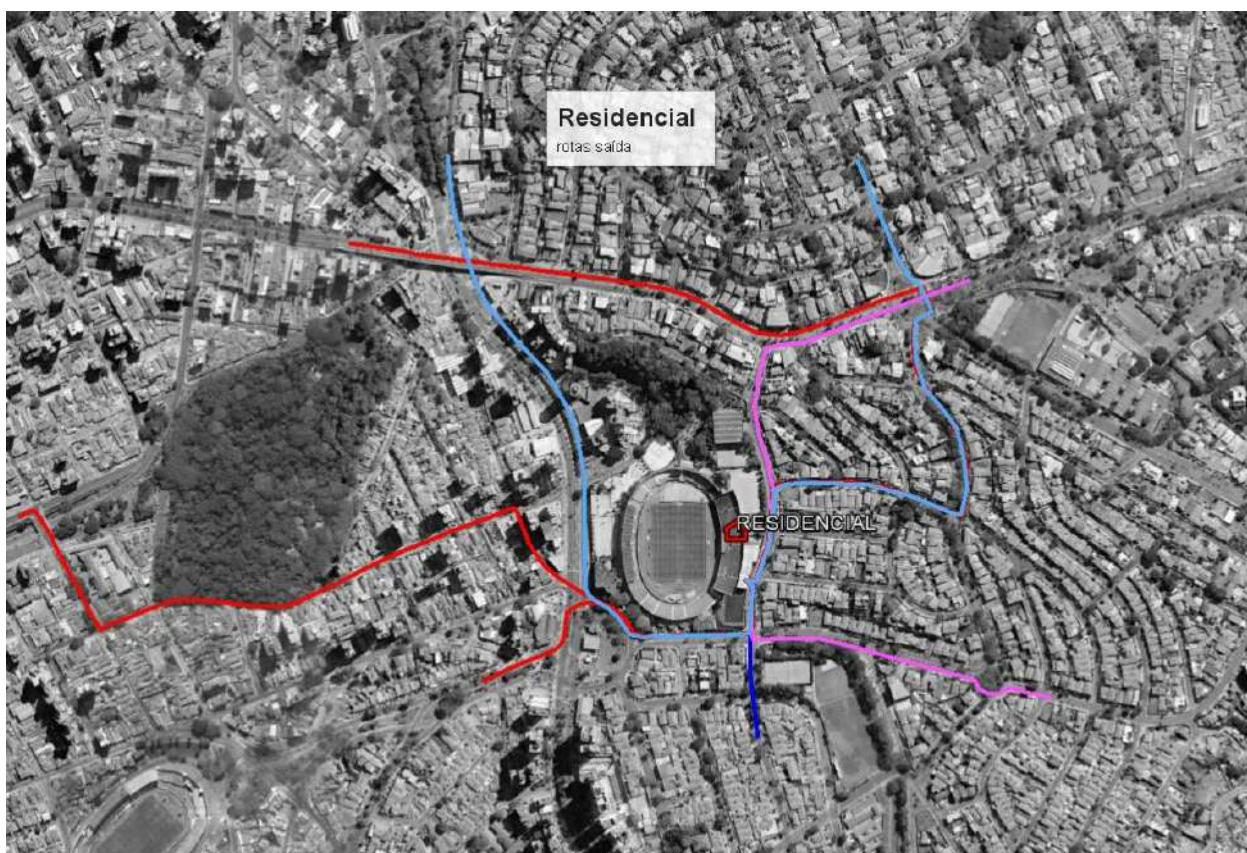


Figura 121 - Rotas de saída – Residencial



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Figura 122 - Rotas chegada - Shopping/Esritórios/Hotel

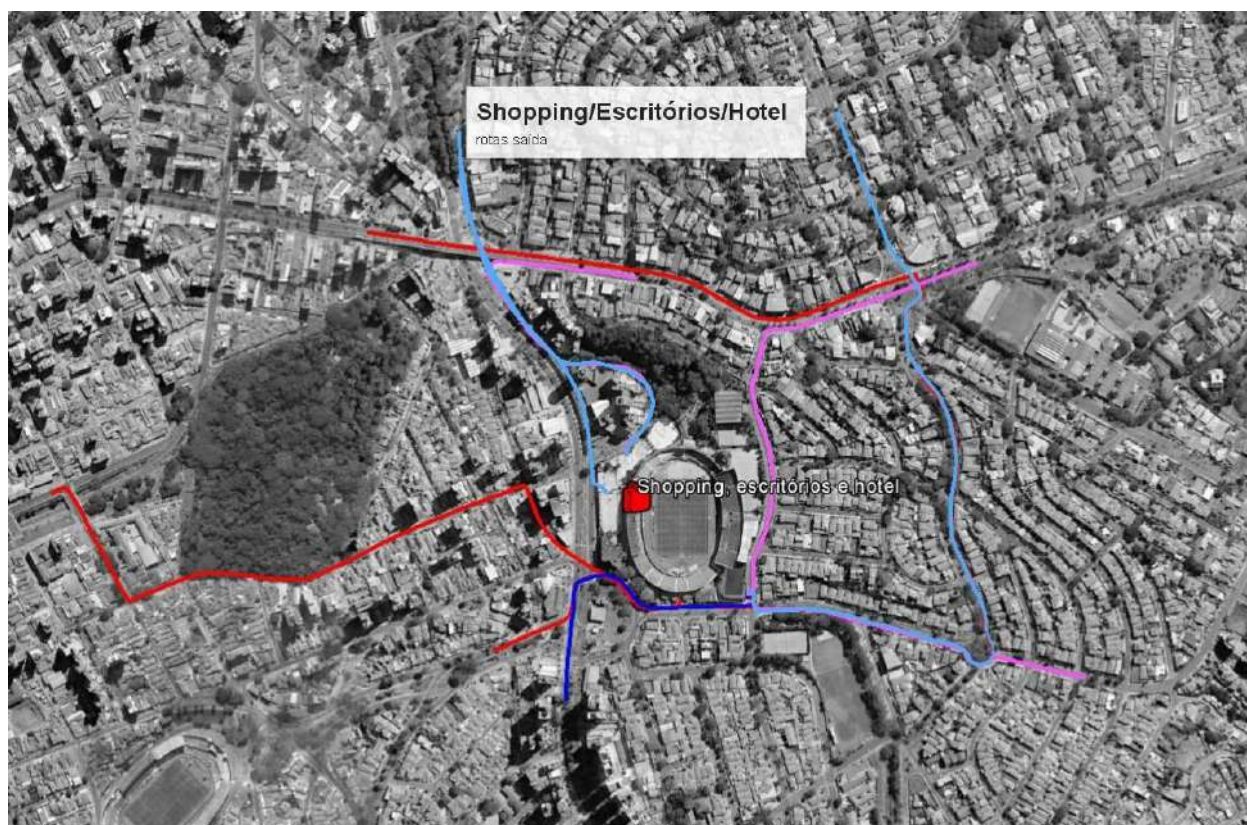


Figura 123 - Rotas de saída - Shopping/Esritórios/Hotel



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Sendo assim as rotas foram definidas conforme tabelas abaixo:

| Chegada residencial | | |
|---------------------|--------|---------|
| ROTA | REGIÃO | ENTRADA |
| ROTA-1 | NORTE | 1-2 |
| ROTA-2 | NORTE | 1-2 |
| ROTA-3 | OESTE | 1-2 |
| ROTA-4 | OESTE | 1-2 |
| ROTA-5 | OESTE | 1-2 |
| ROTA-6 | LESTE | 1-2 |
| ROTA-7 | LESTE | 1-2 |
| ROTA-8 | SUL | 1-2 |

| Saída residencial | | |
|-------------------|--------|-------|
| ROTA | REGIÃO | SAÍDA |
| ROTA-1 | NORTE | 1-2 |
| ROTA-2 | NORTE | 1-2 |
| ROTA-3 | OESTE | 1-2 |
| ROTA-4 | OESTE | 1-2 |
| ROTA-5 | OESTE | 1-2 |
| ROTA-6 | LESTE | 1-2 |
| ROTA-7 | LESTE | 1-2 |
| ROTA-8 | SUL | 1-2 |

| Chegada Shopping/escritórios/hotel | | |
|------------------------------------|--------|---------|
| ROTA | REGIÃO | ENTRADA |
| ROTA-1 | NORTE | 5 |
| ROTA-2 | NORTE | 4 |
| ROTA-3 | NORTE | 3 |
| ROTA-4 | OESTE | 3 |
| ROTA-5 | OESTE | 5 |
| ROTA-6 | OESTE | 4 |
| ROTA-7 | OESTE | 5 |
| ROTA-8 | LESTE | 3 |
| ROTA-9 | LESTE | 3 |
| ROTA-10 | LESTE | 5 |
| ROTA-11 | SUL | 4 |
| ROTA-12 | SUL | 5 |

| Saída Shopping/escritórios/hotel | | |
|----------------------------------|--------|-------|
| ROTA | REGIÃO | SAÍDA |
| ROTA-1 | NORTE | 6 |
| ROTA-2 | NORTE | 5 |
| ROTA-3 | NORTE | 3 |
| ROTA-4 | OESTE | 3 |
| ROTA-5 | OESTE | 3-4 |
| ROTA-6 | OESTE | 3-4 |
| ROTA-7 | LESTE | 3 |
| ROTA-8 | LESTE | 3 |
| ROTA-9 | LESTE | 6 |
| ROTA-10 | SUL | 3-4 |

Utilizou-se a volumetria de cada via dentro das rotas acima definidas para determinar a proporção de viagens que naturalmente seriam atraídas para as mesmas, conforme tabela abaixo:

| | | volumes das aproximações | | | | | | | | |
|------------|-----------------------------------|--------------------------|-------|------|--------|-------|------|-------|-------|------|
| | | manhã | soma | % | almoço | soma | % | tarde | soma | % |
| rota norte | Avenida José de Souza Campos | 1216 | 1980 | 61% | 1560 | 2427 | 64% | 2871 | 3986 | 72% |
| | Avenida Jesuino Marcondes Salgado | 764 | | 39% | 867 | | 36% | 1115 | | 28% |
| | | | total | 100% | | total | 100% | | total | 100% |
| rota oeste | Avenida Dr. Moraes Salles | 1713 | 5653 | 30% | 1733 | 4686 | 37% | 2190 | 5452 | 40% |
| | Rua General Marcondes Salgado | 2792 | | 49% | 2148 | | 46% | 2396 | | 44% |
| | Av. Ayrton Senna | 1148 | | 20% | 805 | | 17% | 866 | | 16% |
| | | | total | 100% | | total | 100% | | total | 100% |
| rota leste | Av. Imperatriz D. Tereza Cristina | 279 | 2513 | 11% | 250 | 2006 | 12% | 454 | 2124 | 21% |
| | Av. Dr. Moraes Salles | 2234 | | 89% | 1756 | | 88% | 1670 | | 79% |
| | | | total | 100% | | total | 100% | | total | 100% |
| rota sul | Avenida Guarani | 149 | 1264 | 12% | 45 | | 5% | 82 | | 7% |
| | Av. Princesa D'Oeste | 1115 | | 88% | 834 | 879 | 95% | 1030 | 1112 | 93% |
| | | | total | 100% | | total | 100% | | total | 100% |

A escolha de utilização de determinada rota dentro das possibilidades de alternativas, utilizou ainda a proporção de distribuição de viagens para cada região cardeal definida. Sendo assim a proporção de



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

distribuição de viagens entrando e saindo para cada uso, por hora pico manhã e tarde, segue a tabela abaixo:

| MANHÃ | | | | | | | | |
|---------------------|--------|-----------|------------------------------------|--------|-----------|--------------------------|--|--|
| Chegada residencial | | | Chegada Shopping/escritórios/hotel | | | | | |
| ROTA | REGIÃO | % ENTRADA | ROTA | REGIÃO | % ENTRADA | | | |
| ROTA-1 | NORTE | 10,5% | ROTA-1 | NORTE | 5,2% | 50% utilizando entrada 5 | | |
| ROTA-2 | NORTE | 6,6% | ROTA-2 | NORTE | 5,2% | 50% utilizando entrada 4 | | |
| ROTA-3 | OESTE | 10,5% | ROTA-3 | NORTE | 6,6% | | | |
| ROTA-4 | OESTE | 17,1% | ROTA-4 | OESTE | 10,5% | | | |
| ROTA-5 | OESTE | 7,1% | ROTA-5 | OESTE | 17,1% | | | |
| ROTA-6 | LESTE | 1,2% | ROTA-6 | OESTE | 3,5% | 50% utilizando entrada 4 | | |
| ROTA-7 | LESTE | 9,3% | ROTA-7 | OESTE | 3,5% | 50% utilizando entrada 5 | | |
| ROTA-8 | SUL | 37,8% | ROTA-8 | LESTE | 1,2% | | | |
| | TOTAL | 100,0% | ROTA-9 | LESTE | 7,5% | 80% utilizando entrada 3 | | |
| | | | ROTA-10 | LESTE | 1,9% | 20% utilizando entrada 5 | | |
| | | | ROTA-11 | SUL | 4,4% | | | |
| | | | ROTA-12 | SUL | 33,3% | | | |
| | | | | TOTAL | 100,0% | | | |
| Saída residencial | | | Saída Shopping/escritórios/hotel | | | | | |
| ROTA | REGIÃO | % SAÍDA | ROTA | REGIÃO | % SAÍDA | | | |
| ROTA-1 | NORTE | 10,5% | ROTA-1 | NORTE | 5,2% | 50% utilizando saída 6 | | |
| ROTA-2 | NORTE | 6,6% | ROTA-2 | NORTE | 5,2% | 50% utilizando saída 5 | | |
| ROTA-3 | OESTE | 10,5% | ROTA-3 | NORTE | 6,6% | | | |
| ROTA-4 | OESTE | 17,1% | ROTA-4 | OESTE | 10,5% | | | |
| ROTA-5 | OESTE | 7,1% | ROTA-5 | OESTE | 17,1% | | | |
| ROTA-6 | LESTE | 1,2% | ROTA-6 | OESTE | 7,1% | | | |
| ROTA-7 | LESTE | 9,3% | ROTA-7 | LESTE | 1,2% | | | |
| ROTA-8 | SUL | 37,8% | ROTA-8 | LESTE | 7,5% | 80% utilizando saída 3 | | |
| | TOTAL | 100,0% | ROTA-9 | LESTE | 1,9% | 20% utilizando saída 6 | | |
| | | | ROTA-10 | SUL | 37,8% | | | |
| | | | | TOTAL | 100,0% | | | |



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| TARDE | | | | | | |
|---------------------|--------|-----------|------------------------------------|--------|-----------|--------------------------|
| Chegada residencial | | | Chegada Shopping/escritórios/hotel | | | |
| ROTA | REGIÃO | % ENTRADA | ROTA | REGIÃO | % ENTRADA | |
| ROTA-1 | NORTE | 12,3% | ROTA-1 | NORTE | 6,1% | 50% utilizando entrada 5 |
| ROTA-2 | NORTE | 4,8% | ROTA-2 | NORTE | 6,1% | 50% utilizando entrada 4 |
| ROTA-3 | OESTE | 13,9% | ROTA-3 | NORTE | 4,8% | |
| ROTA-4 | OESTE | 15,3% | ROTA-4 | OESTE | 13,9% | |
| ROTA-5 | OESTE | 5,5% | ROTA-5 | OESTE | 15,3% | |
| ROTA-6 | LESTE | 2,2% | ROTA-6 | OESTE | 2,8% | 50% utilizando entrada 4 |
| ROTA-7 | LESTE | 8,3% | ROTA-7 | OESTE | 2,8% | 50% utilizando entrada 5 |
| ROTA-8 | SUL | 37,8% | ROTA-8 | LESTE | 2,2% | |
| | TOTAL | 100,0% | ROTA-9 | LESTE | 6,6% | 80% utilizando entrada 3 |
| | | | ROTA-10 | LESTE | 1,7% | 20% utilizando entrada 5 |
| | | | ROTA-11 | SUL | 2,8% | |
| | | | ROTA-12 | SUL | 35,0% | |
| | | | | TOTAL | 100,0% | |
| Saída residencial | | | Saída Shopping/escritórios/hotel | | | |
| ROTA | REGIÃO | % SAÍDA | ROTA | REGIÃO | % SAÍDA | |
| ROTA-1 | NORTE | 12,3% | ROTA-1 | NORTE | 6,1% | 50% utilizando saída 6 |
| ROTA-2 | NORTE | 4,8% | ROTA-2 | NORTE | 6,1% | 50% utilizando saída 5 |
| ROTA-3 | OESTE | 13,9% | ROTA-3 | NORTE | 4,8% | |
| ROTA-4 | OESTE | 15,3% | ROTA-4 | OESTE | 13,9% | |
| ROTA-5 | OESTE | 5,5% | ROTA-5 | OESTE | 15,3% | |
| ROTA-6 | LESTE | 2,2% | ROTA-6 | OESTE | 5,5% | |
| ROTA-7 | LESTE | 8,3% | ROTA-7 | LESTE | 2,2% | |
| ROTA-8 | SUL | 37,8% | ROTA-8 | LESTE | 6,6% | 80% utilizando saída 3 |
| | TOTAL | 100,0% | ROTA-9 | LESTE | 1,7% | 20% utilizando saída 6 |
| | | | ROTA-10 | SUL | 37,8% | |
| | | | | TOTAL | 100,0% | |

Portanto as viagens pelo modo automóvel para cada uso do empreendimento nos horários de pico resultou na seguinte distribuição:



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| MANHÃ | | | | | |
|----------------------------|---------------|-----------------|---|---------------|-----------------|
| Chegada residencial | | | Chegada Shopping/escritórios/hotel | | |
| ROTA | REGIÃO | VEÍCULOS | ROTA | REGIÃO | VEÍCULOS |
| ROTA-1 | NORTE | 6 | ROTA-1 | NORTE | 42 |
| ROTA-2 | NORTE | 4 | ROTA-2 | NORTE | 42 |
| ROTA-3 | OESTE | 6 | ROTA-3 | NORTE | 53 |
| ROTA-4 | OESTE | 9 | ROTA-4 | OESTE | 85 |
| ROTA-5 | OESTE | 4 | ROTA-5 | OESTE | 139 |
| ROTA-6 | LESTE | 1 | ROTA-6 | OESTE | 28 |
| ROTA-7 | LESTE | 5 | ROTA-7 | OESTE | 28 |
| ROTA-8 | SUL | 21 | ROTA-8 | LESTE | 9 |
| | TOTAL | 55 | ROTA-9 | LESTE | 60 |
| | | | ROTA-10 | LESTE | 15 |
| | | | ROTA-11 | SUL | 36 |
| | | | ROTA-12 | SUL | 269 |
| | | | | TOTAL | 808 |
| | | | | | |
| Saída residencial | | | Saída Shopping/escritórios/hotel | | |
| ROTA | REGIÃO | VEÍCULOS | ROTA | REGIÃO | VEÍCULOS |
| ROTA-1 | NORTE | 17 | ROTA-1 | NORTE | 10 |
| ROTA-2 | NORTE | 11 | ROTA-2 | NORTE | 10 |
| ROTA-3 | OESTE | 17 | ROTA-3 | NORTE | 12 |
| ROTA-4 | OESTE | 28 | ROTA-4 | OESTE | 20 |
| ROTA-5 | OESTE | 12 | ROTA-5 | OESTE | 32 |
| ROTA-6 | LESTE | 2 | ROTA-6 | OESTE | 13 |
| ROTA-7 | LESTE | 15 | ROTA-7 | LESTE | 2 |
| ROTA-8 | SUL | 62 | ROTA-8 | LESTE | 14 |
| | TOTAL | 165 | ROTA-9 | LESTE | 3 |
| | | | ROTA-10 | SUL | 70 |
| | | | | TOTAL | 186 |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| TARDE | | | | | |
|---------|--------------|------------|------------------------------------|--------------|-------------|
| Chegada | | | Chegada Shopping/escritórios/hotel | | |
| ROTA | REGIÃO | VEÍCULOS | ROTA | REGIÃO | VEÍCULOS |
| ROTA-1 | NORTE | 16 | ROTA-1 | NORTE | 46 |
| ROTA-2 | NORTE | 10 | ROTA-2 | NORTE | 46 |
| ROTA-3 | OESTE | 16 | ROTA-3 | NORTE | 57 |
| ROTA-4 | OESTE | 26 | ROTA-4 | OESTE | 92 |
| ROTA-5 | OESTE | 11 | ROTA-5 | OESTE | 150 |
| ROTA-6 | LESTE | 2 | ROTA-6 | OESTE | 31 |
| ROTA-7 | LESTE | 14 | ROTA-7 | OESTE | 31 |
| ROTA-8 | SUL | 57 | ROTA-8 | LESTE | 10 |
| | TOTAL | 152 | ROTA-9 | LESTE | 65 |
| | | | ROTA-10 | LESTE | 16 |
| | | | ROTA-11 | SUL | 39 |
| | | | ROTA-12 | SUL | 291 |
| | | | | TOTAL | 874 |
| Saída | | | Saída Shopping/escritórios/hotel | | |
| ROTA | REGIÃO | VEÍCULOS | ROTA | REGIÃO | VEÍCULOS |
| ROTA-1 | NORTE | 10 | ROTA-1 | NORTE | 62 |
| ROTA-2 | NORTE | 6 | ROTA-2 | NORTE | 62 |
| ROTA-3 | OESTE | 10 | ROTA-3 | NORTE | 78 |
| ROTA-4 | OESTE | 17 | ROTA-4 | OESTE | 126 |
| ROTA-5 | OESTE | 7 | ROTA-5 | OESTE | 205 |
| ROTA-6 | LESTE | 1 | ROTA-6 | OESTE | 84 |
| ROTA-7 | LESTE | 9 | ROTA-7 | LESTE | 14 |
| ROTA-8 | SUL | 37 | ROTA-8 | LESTE | 89 |
| | TOTAL | 97 | ROTA-9 | LESTE | 22 |
| | | | ROTA-10 | SUL | 451 |
| | | | | TOTAL | 1194 |

A hora pico do empreendimento segue os horários abaixo:

| | HORA PICO | | | |
|----------------|-----------|-------|-------|-------|
| | MANHÃ | | TARDE | |
| empreendimento | | | | |
| shopping | 08:00 | 09:00 | 19:00 | 20:00 |
| residencial | 07:00 | 08:00 | 17:00 | 18:00 |
| escritórios | 07:00 | 08:00 | 17:00 | 18:00 |
| hotel | 07:00 | 08:00 | 17:00 | 18:00 |

Os usos previstos do empreendimento possuem horário de pico diferentes do pico da via, porém como reserva técnica de capacidade foi considerado que estes volumes coincidirão com o horário pico da via. Portanto os carregamentos nas rotas de chegada e saída seguiram este raciocínio.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

e. Projeções

O estudo de tráfego deve incluir em suas análises as projeções de tráfego para o ano de projeto quando o empreendimento se encontrar totalmente implantado.

Para tal o estudo deve avaliar o sistema viário também na situação futura.

Sendo assim, levando em consideração a dinâmica das obras e a sequência de inauguração dos usos, é demonstrado abaixo as expectativas de ocupações:

| Empreendimento | Ano | |
|----------------|-------|------|
| | 2019 | 2022 |
| shopping | 100% | 100% |
| residencial | 16,7% | 100% |
| escritórios | 100% | 100% |
| hotel | 100% | 100% |

Para os estudos de capacidade realizados neste trabalho, considerou-se o ano de projeto de 2022, para os picos da manhã e tarde, quando o empreendimento estiver com sua previsão de demanda máxima.

O tráfego futuro previsto para estar circulando pelo sistema viário atual sob análise, foi projetado considerando uma taxa de crescimento uniforme de 2,5% ao ano. Portanto o fluxo de cada aproximação foi multiplicado pelo fator de aumento de 1,16.

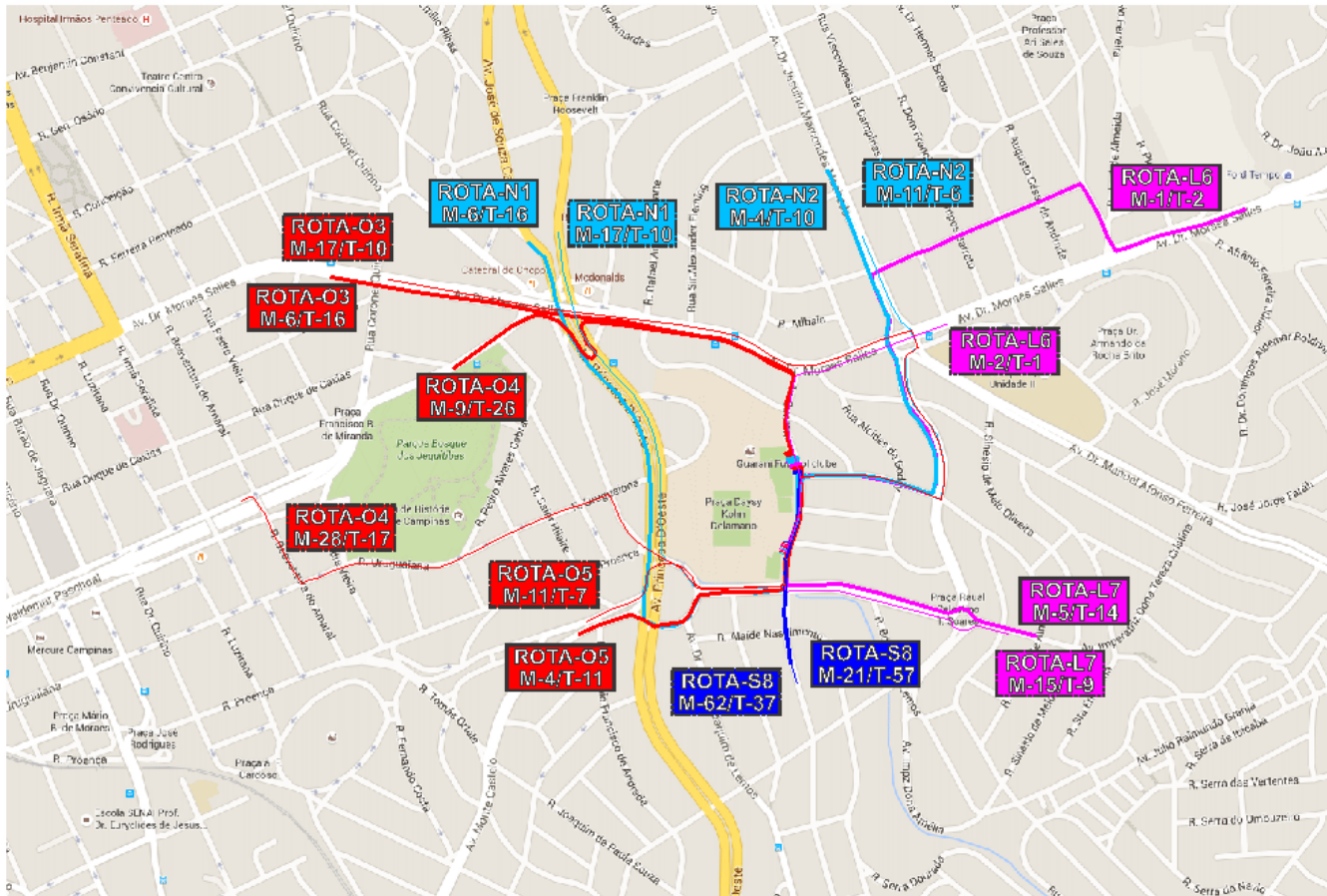
f. Nível de Serviço futuro

Seguindo o raciocínio acima foi adicionada a rede de simulação, o volume segundo a projeção de tráfego e os volumes de carregamento nos movimentos das rotas, para toda a área de influência mediata, para o ano de 2022.

Assim sendo, segue abaixo a situação futura dos cruzamentos, considerando que nenhuma melhoria viária tenha ocorrido.



Residencial



| | | |
|--|-------------------------|--------------------|
| | entradas manhã/tarde | entradas 55/152 |
| | saídas manhã/tarde | saídas 165/297 |

rotas norte
rotas oeste

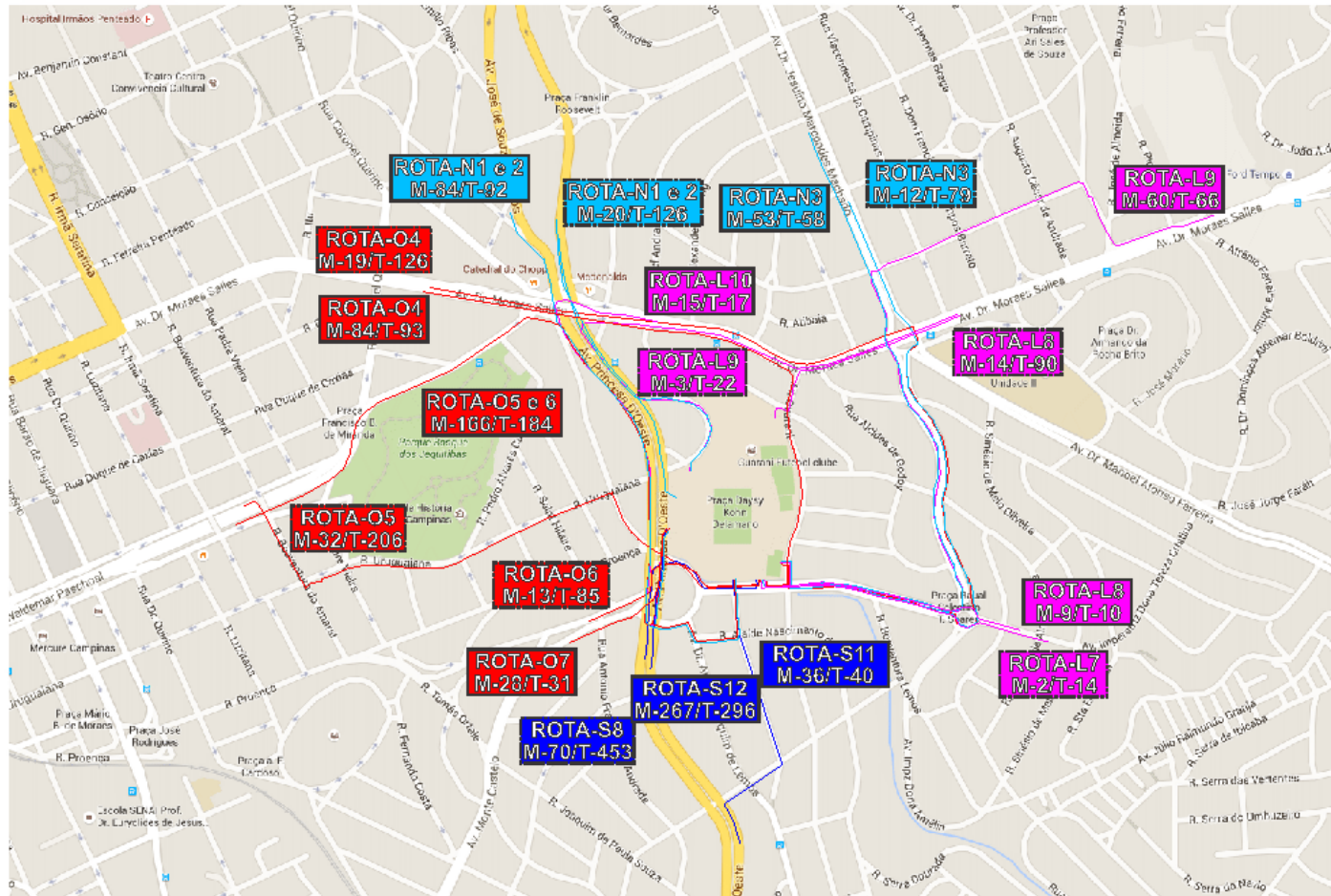
rotas sul
rotas leste

Sistema viário atual
Ano 2022

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Shopping / Escritórios / Hotel



| | | |
|--|-------------------------|---------------------|
| | entradas manhã/tarde | entradas 803/888 |
| | saídas manhã/tarde | saídas 185/1200 |

rotas norte
rotas oeste

rotas sul
rotas leste

Sistema viário atual
Ano 2022

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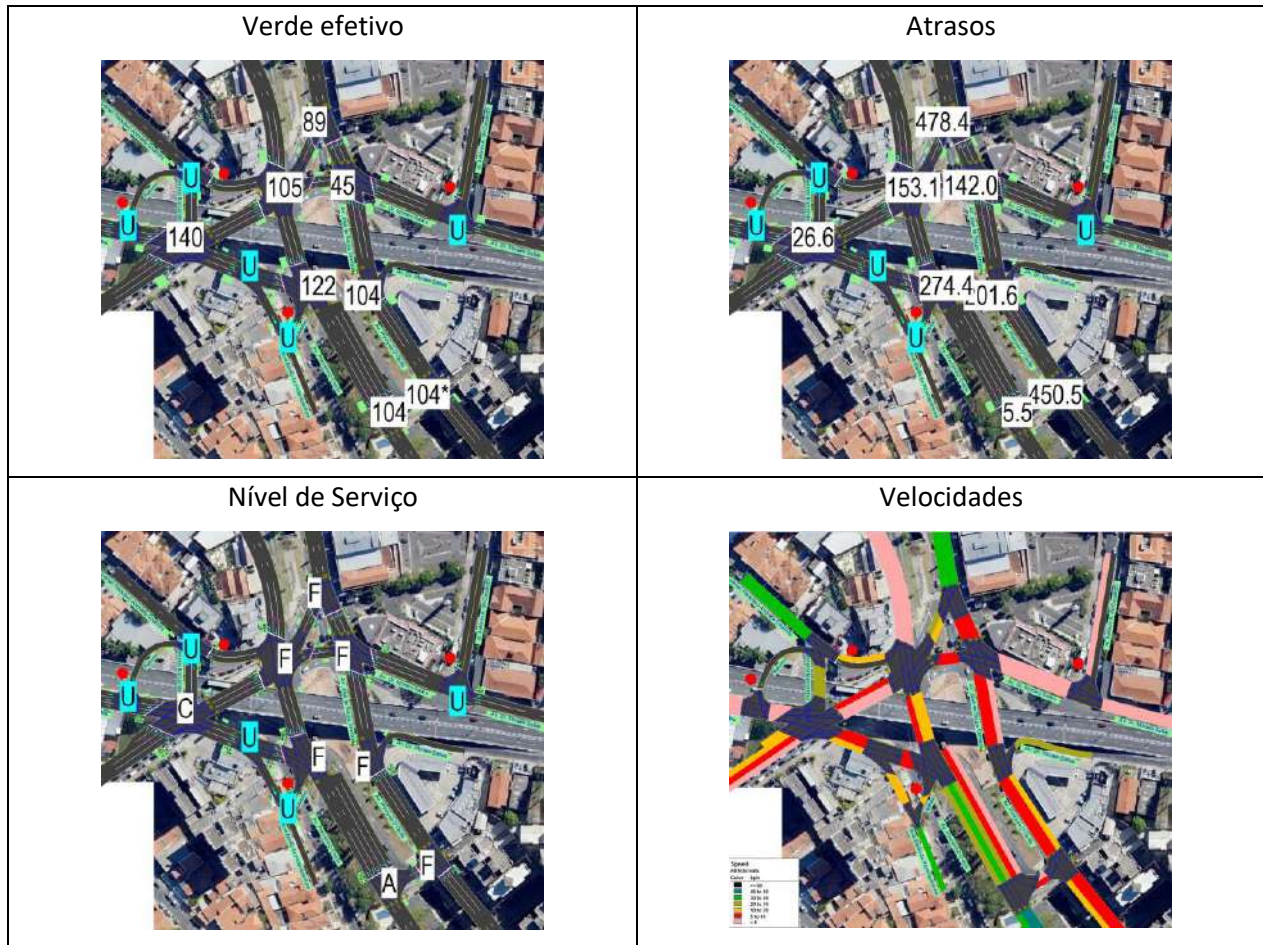


Figura 124 - Av. Princesa D'Oeste x Av. Souza Campos - manhã



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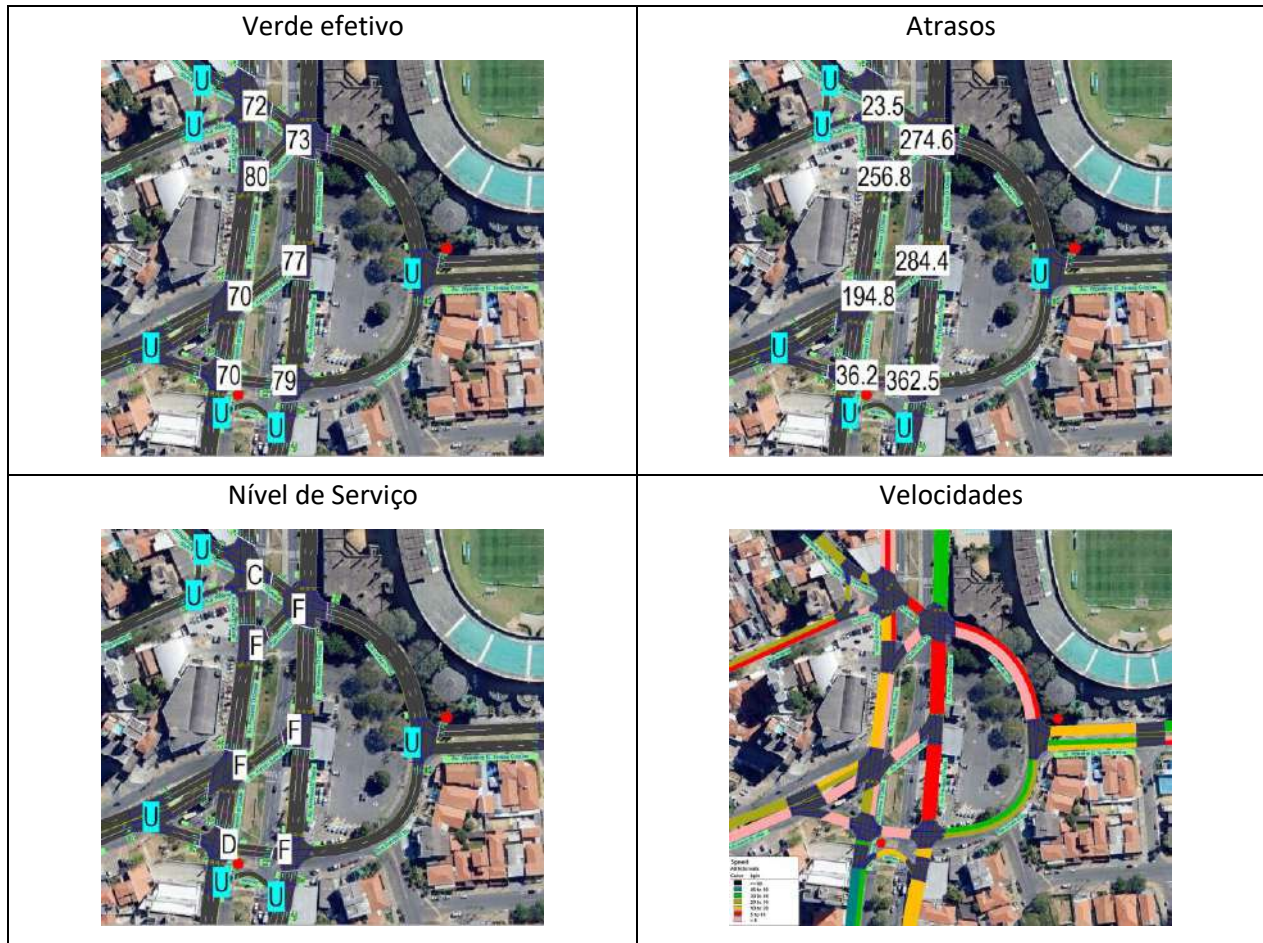


Figura 125 - Av. Princesa D'Oeste x Av. Conde D'Eu - manhã



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Figura 126 - Av. Imperatriz Tereza Cristina x Av. Guarani - manhã



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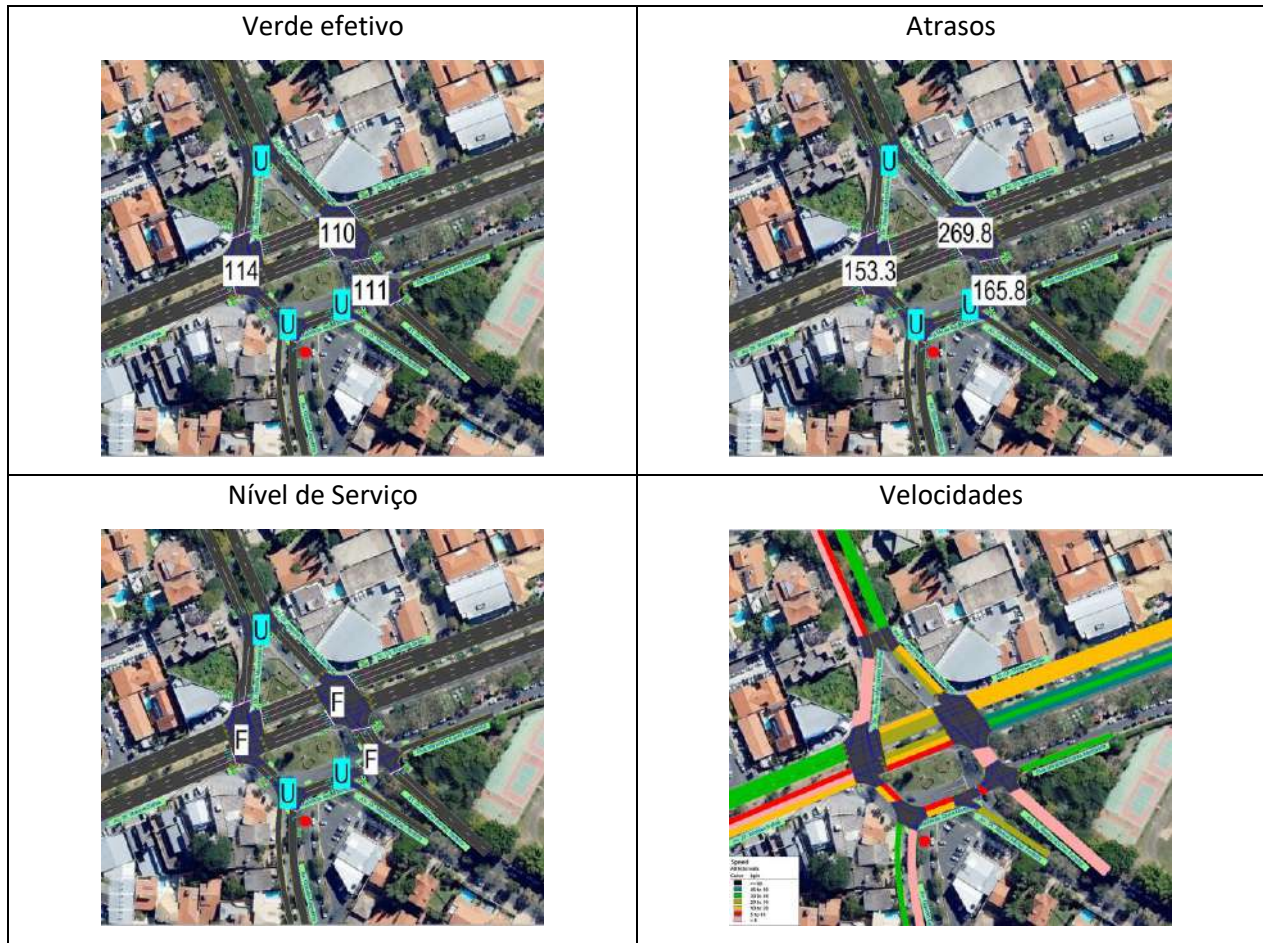


Figura 127 - Av. Dr. Jesuíno Machado x Av. Dr. Moraes Salles - manhã



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

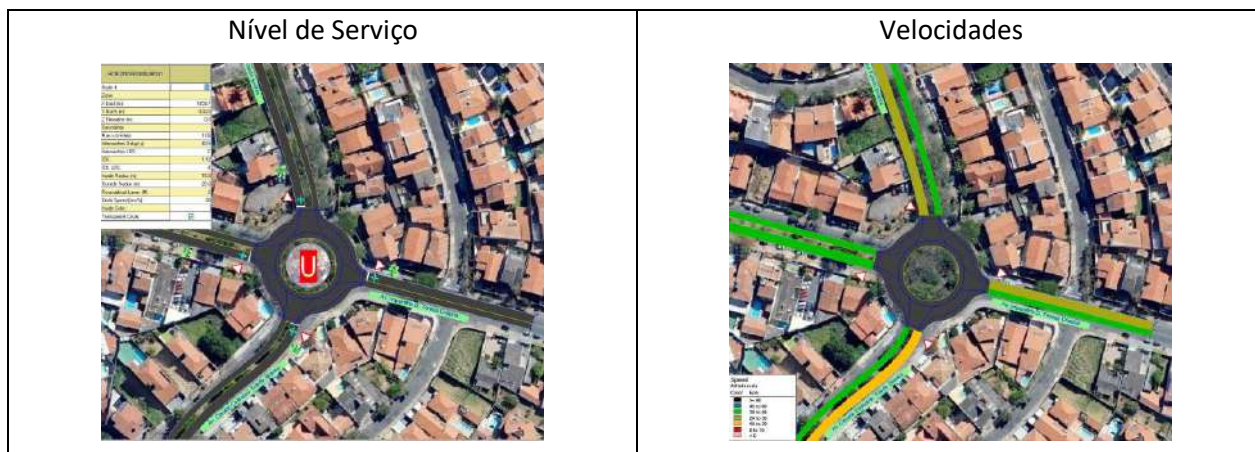


Figura 128 - Rotatória Av. Imperatriz D. Tereza Cristina x Av. Claudio Celestino Soares - manhã

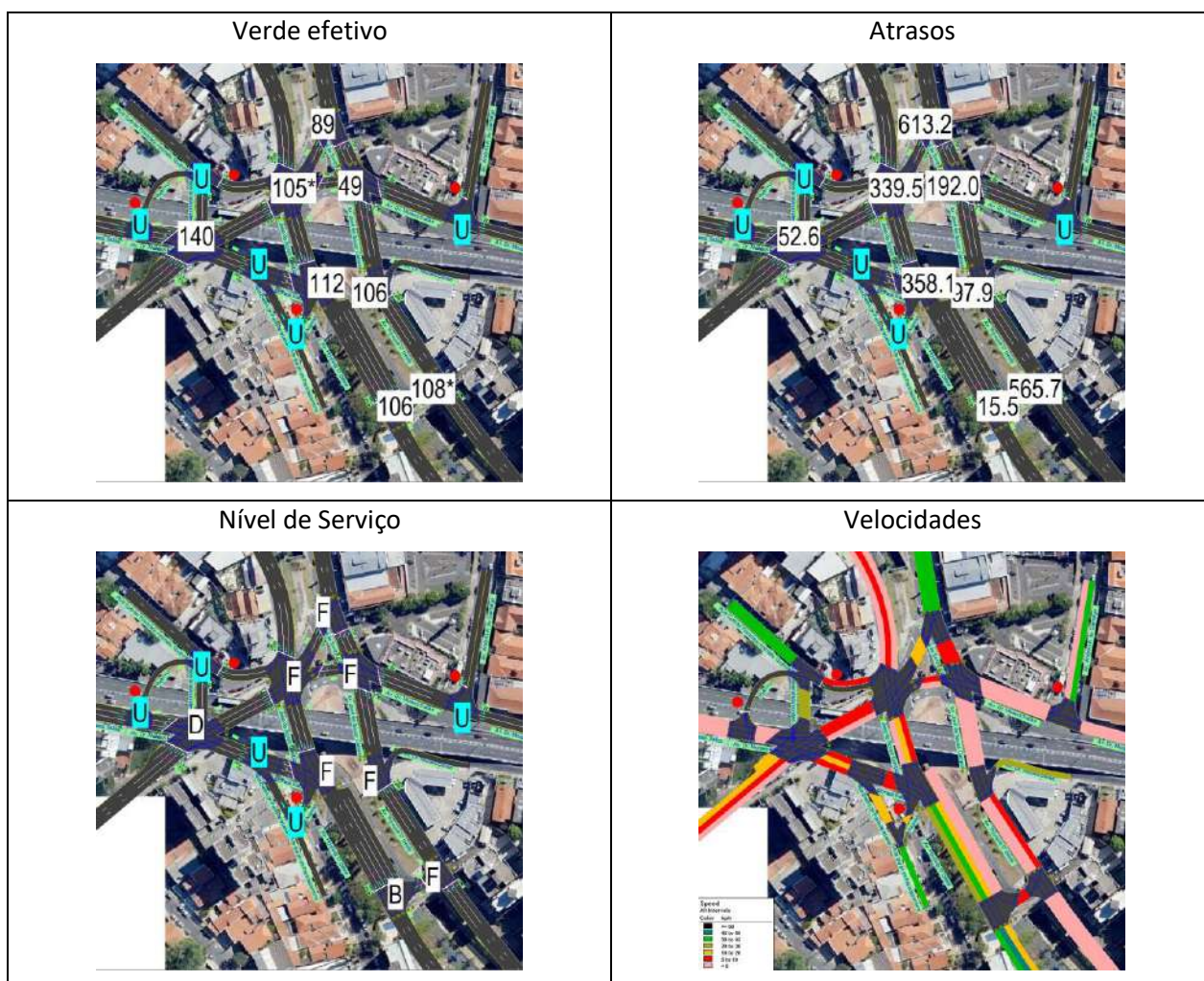


Figura 129 - Av. Princesa D'Oeste x Av. Souza Campos - tarde



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

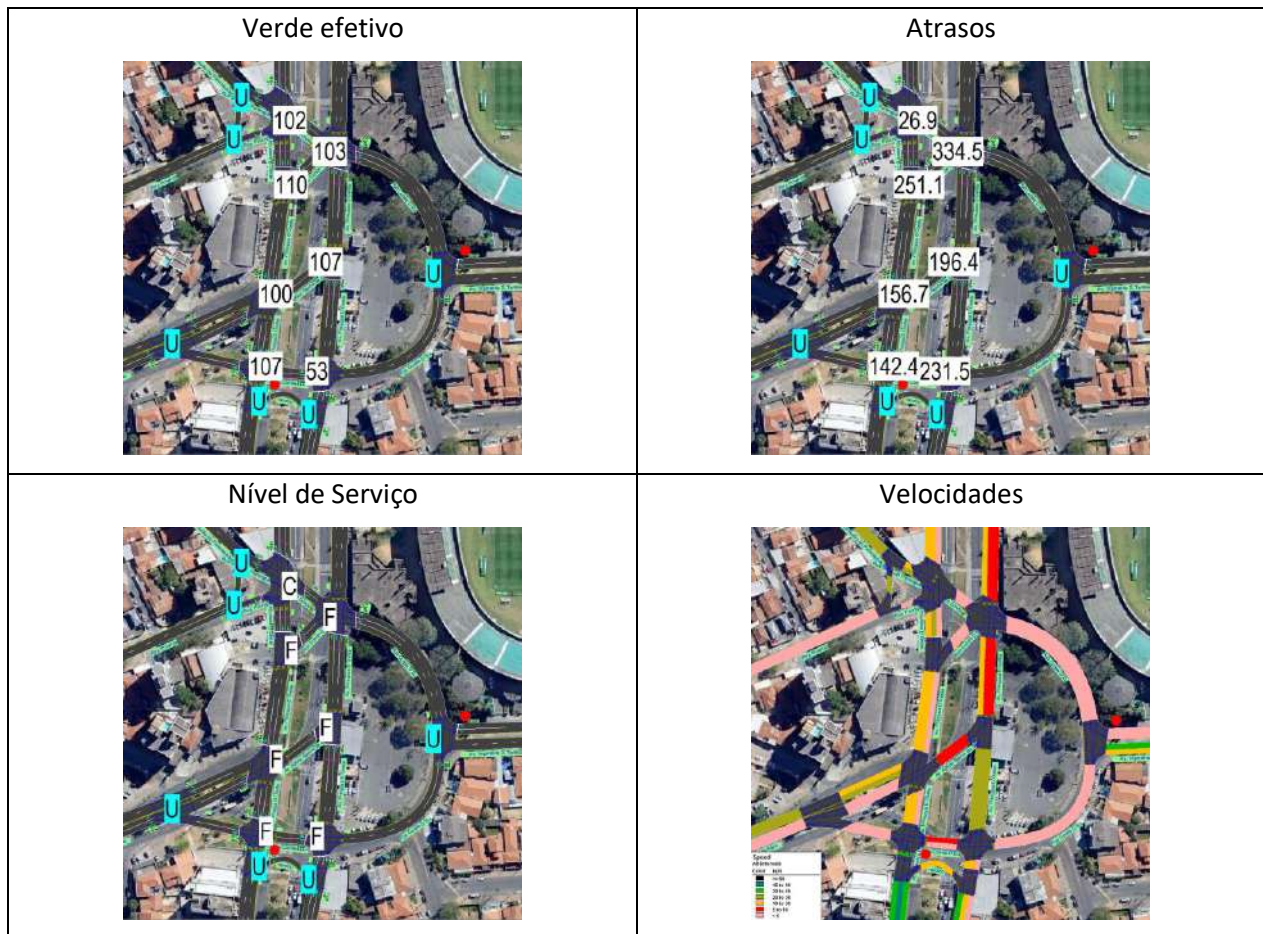
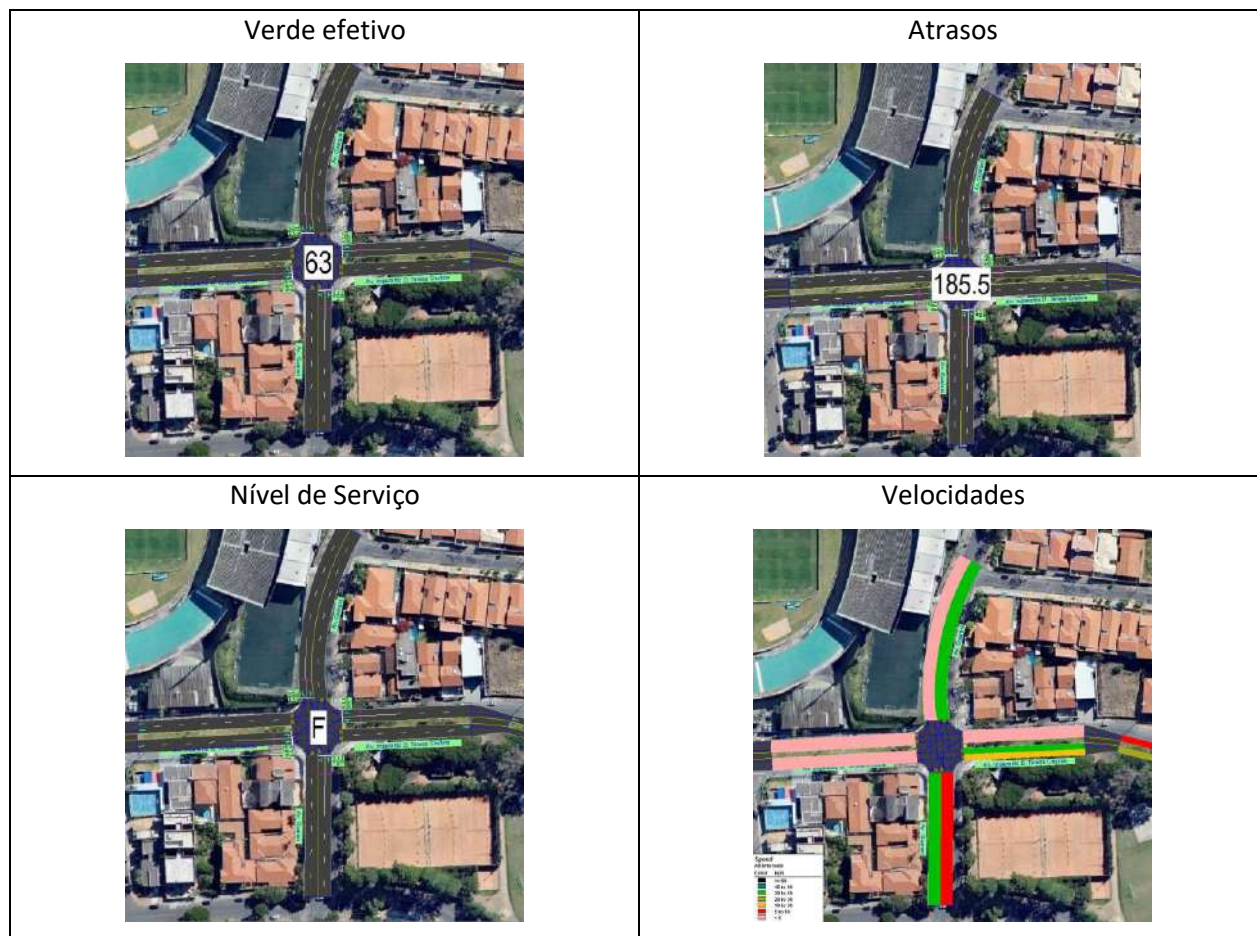


Figura 130 - Av. Princesa D'Oeste x Av. Conde D'Eu - tarde



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AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

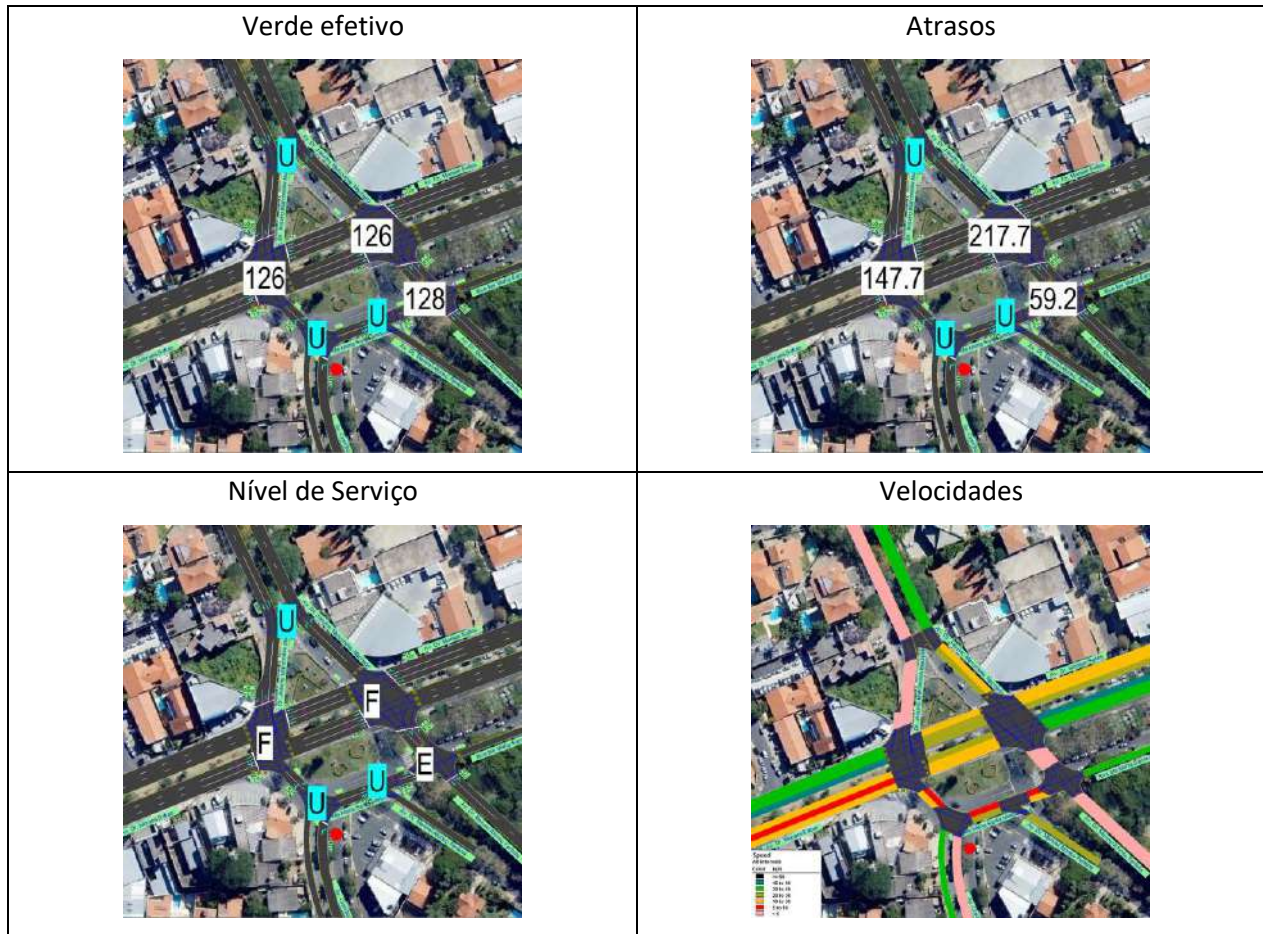
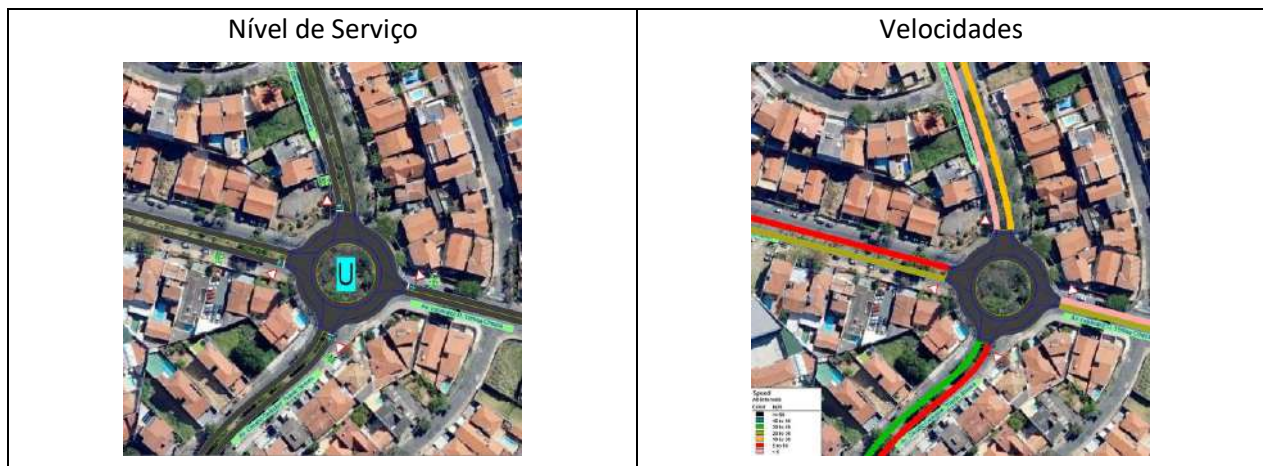


Figura 132 - Av. Dr. Jesuíno Machado x Av. Dr. Moraes Salles - tarde





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Abaixo segue figuras resumo contendo o nível de serviço e a relação V/C da situação após implantação do empreendimento no ano de 2022.



Figura 134 - VHP manhã, NS e V/C - ano 2022

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Figura 135 - VHP manhã, NS e V/C - ano 2022

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Abaixo segue tabela resumo das condições dos indicadores de operação do sistema viário na situação atual (ano 2016) e a situação de plena operação do empreendimento (2022), considerando que nenhuma melhoria do sistema viário seja feita.

| HORA PICO MANHÃ | | | 2016 | | | 2022 | | | |
|------------------|-------------------------------------|-----------------------------------|--|----|--------|------|----|--------|------|
| nó | via 1 | via 2 | via 3 | NS | atraso | v/c | NS | atraso | v/c |
| SEMAFORIZADOS | | | | | | | | | |
| 45 | Rua General Marcondes Salgado | Av. Dr. Moraes Salles | | C | 20,2 | 0,81 | C | 26,6 | 0,95 |
| 17 | Rua General Marcondes Salgado | Av. José de Souza Campos | Rua Coronel Francisco Andrade Coutinho | F | 126,6 | 0,81 | F | 153,1 | 0,99 |
| 54 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | F | 249,8 | 1,03 | F | 274,4 | 1,24 |
| 28 | Av. Princesa D'Oeste | | | A | 3,8 | 0,49 | A | 5,5 | 0,58 |
| 7 | Av. Princesa D'Oeste | | | F | 229,9 | 1,63 | F | 450,5 | 1,92 |
| 42 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | F | 112,3 | 0,93 | F | 201,6 | 1,09 |
| 43 | Av. José de Souza Campos | Av. Dr. Moraes Salles | | F | 95,1 | 0,8 | F | 142 | 0,95 |
| 66 | Av. José de Souza Campos | | | F | 469,7 | 1,99 | F | 478,4 | 2,34 |
| 6 | Av. Princesa D'Oeste | Rua Conde D'Eu | Rua Barão de Paranapanema | B | 15,7 | 0,67 | C | 23,5 | 0,93 |
| 63 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 228,4 | 0,61 | F | 256,8 | 0,83 |
| 5 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 118,3 | 0,8 | F | 194,8 | 1,07 |
| 4 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | Rua Conde D'Eu | B | 15,9 | 0,88 | D | 36,2 | 1,02 |
| 25 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 160,7 | 1,65 | F | 362,5 | 2,52 |
| 62 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 281,7 | 0,73 | F | 284,4 | 0,88 |
| 26 | Rua Conde D'Eu | Av. Princesa D'Oeste | | F | 154 | 0,95 | F | 274,6 | 1,41 |
| 2 | Av. Guarani | Av. Imperatriz D. Tereza Cristina | | F | 116,4 | 1,39 | F | 200,1 | 1,62 |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 123,7 | 0,98 | F | 153,3 | 1,15 |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 243,2 | 2,05 | F | 269,8 | 2,5 |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | F | 124,3 | 1,5 | F | 165,8 | 1,74 |
| NÃO SEMAFORIZADO | | | | | | | | | |
| 71 | Av. Guarani | Av. Dr. Moraes Salles | | B | 10,5 | 1,14 | D | 34,6 | 1,77 |
| ROTATÓRIA | | | | | | | | | |
| 11 | Av. Claudio Celestino Toledo Soares | Av. Imperatriz D. Tereza Cristina | | C | 17,6 | 0,84 | E | 40,5 | 1,08 |

| HORA PICO TARDE | | | 2016 | | | 2022 | | | |
|------------------|-------------------------------------|-----------------------------------|--|----|--------|------|----|--------|------|
| nó | via 1 | via 2 | via 3 | NS | atraso | v/c | NS | atraso | v/c |
| SEMAFORIZADOS | | | | | | | | | |
| 45 | Rua General Marcondes Salgado | Av. Dr. Moraes Salles | | D | 37,3 | 1,06 | D | 52,6 | 1,23 |
| 17 | Rua General Marcondes Salgado | Av. José de Souza Campos | Rua Coronel Francisco Andrade Coutinho | F | 235,9 | 1,53 | F | 339,5 | 1,83 |
| 54 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | F | 333,2 | 1,53 | F | 358,1 | 1,84 |
| 28 | Av. Princesa D'Oeste | | | A | 7,3 | 0,65 | B | 15,5 | 0,76 |
| 7 | Av. Princesa D'Oeste | | | F | 381,4 | 2,3 | F | 565,7 | 2,86 |
| 42 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | E | 55,2 | 0,98 | F | 97,9 | 1,18 |
| 43 | Av. José de Souza Campos | Av. Dr. Moraes Salles | | F | 146,8 | 0,96 | F | 192 | 1,17 |
| 66 | Av. José de Souza Campos | | | F | 540,4 | 2,23 | F | 613,2 | 2,7 |
| 6 | Av. Princesa D'Oeste | Rua Conde D'Eu | Rua Barão de Paranapanema | B | 16,7 | 0,72 | C | 26,9 | 0,95 |
| 63 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 199,4 | 0,79 | F | 251,1 | 1,4 |
| 5 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 106,1 | 0,85 | F | 156,7 | 1,25 |
| 4 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | Rua Conde D'Eu | F | 112,6 | 1,18 | F | 142,4 | 1,13 |
| 25 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 87,3 | 1,27 | F | 231,5 | 1,87 |
| 62 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 227,3 | 0,85 | F | 196,4 | 1,05 |
| 26 | Rua Conde D'Eu | Av. Princesa D'Oeste | | F | 86,4 | 1,26 | F | 334,5 | 2,27 |
| 2 | Av. Guarani | Av. Imperatriz D. Tereza Cristina | | C | 33,2 | 0,89 | F | 203,2 | 1,97 |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | D | 49 | 1,11 | F | 147,7 | 1,43 |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 138,3 | 0,8 | F | 217,7 | 1,21 |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | D | 45,8 | 1,1 | E | 59,2 | 1,28 |
| NÃO SEMAFORIZADO | | | | | | | | | |
| 71 | Av. Guarani | Av. Dr. Moraes Salles | | A | 2,7 | 0,81 | D | 27,7 | 1,82 |
| ROTATÓRIA | | | | | | | | | |
| 11 | Av. Claudio Celestino Toledo Soares | Av. Imperatriz D. Tereza Cristina | | C | 23,2 | 0,94 | F | 99,3 | 1,37 |

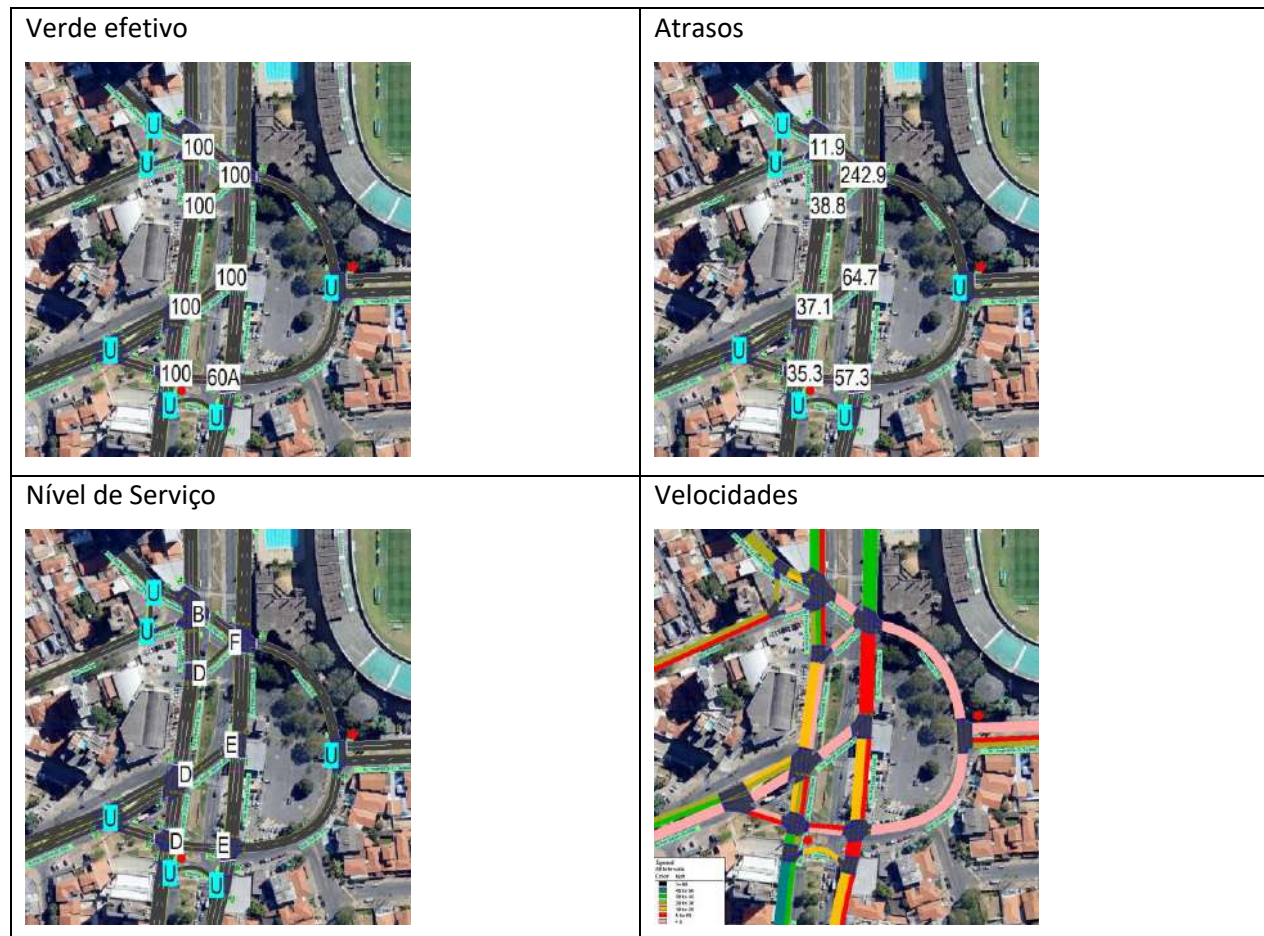


Figura 137 - Av. Princesa D'Oeste x Av. Conde D'Eu - manhã



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Figura 138 - Av. Imperatriz Tereza Cristina x Av. Guarani - manhã

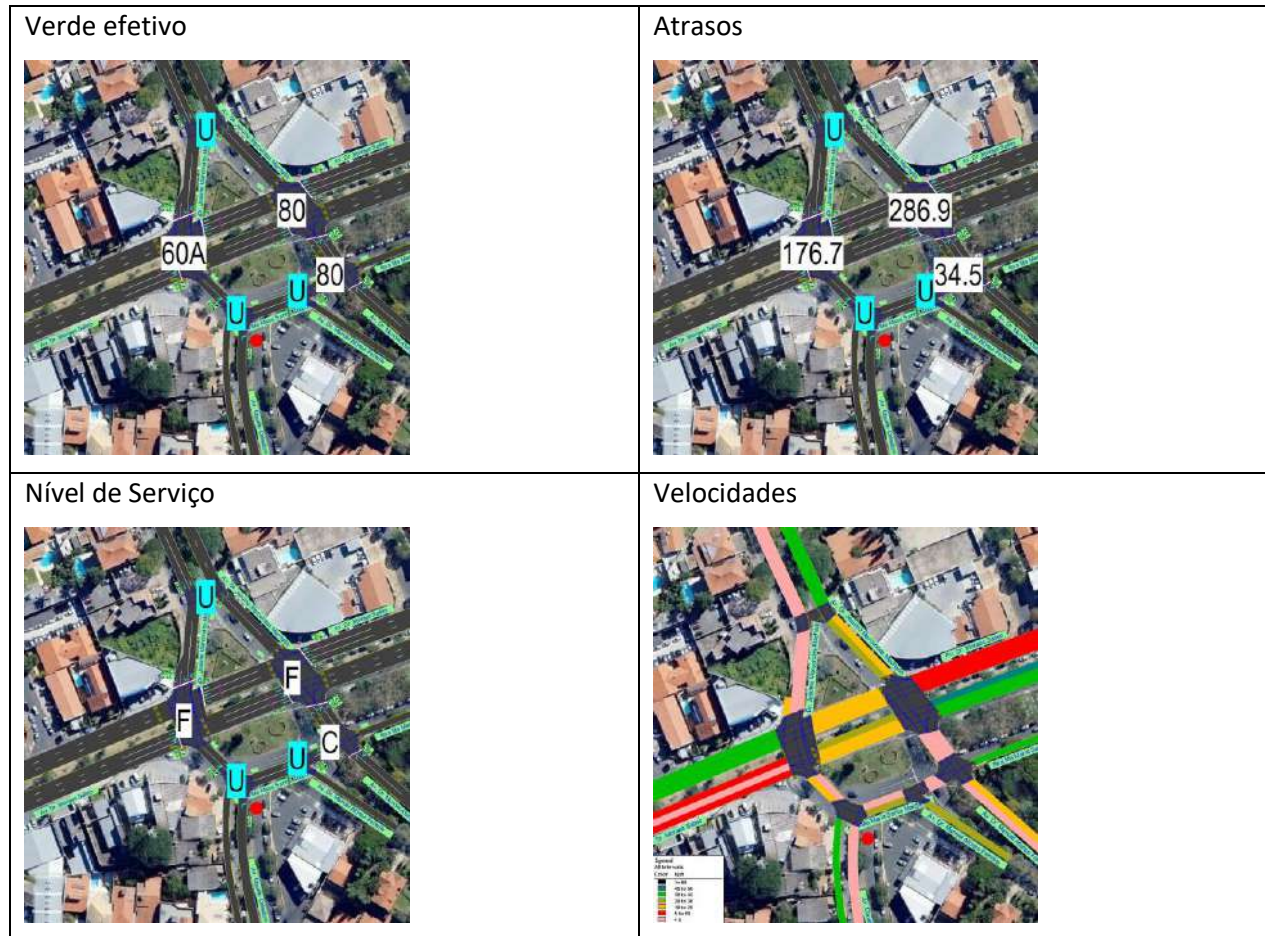


Figura 139 - Av. Dr. Jesuíno Machado x Av. Dr. Moraes Salles - manhã

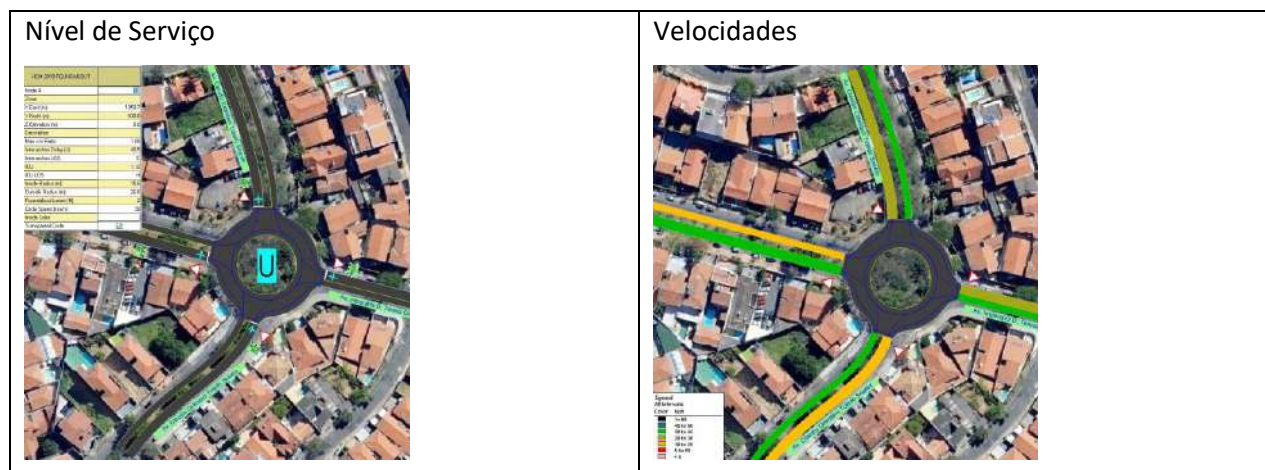


Figura 140 - Rotatória Av. Imperatriz D. Tereza Cristina x Av. Claudio Celestino Soares - manhã

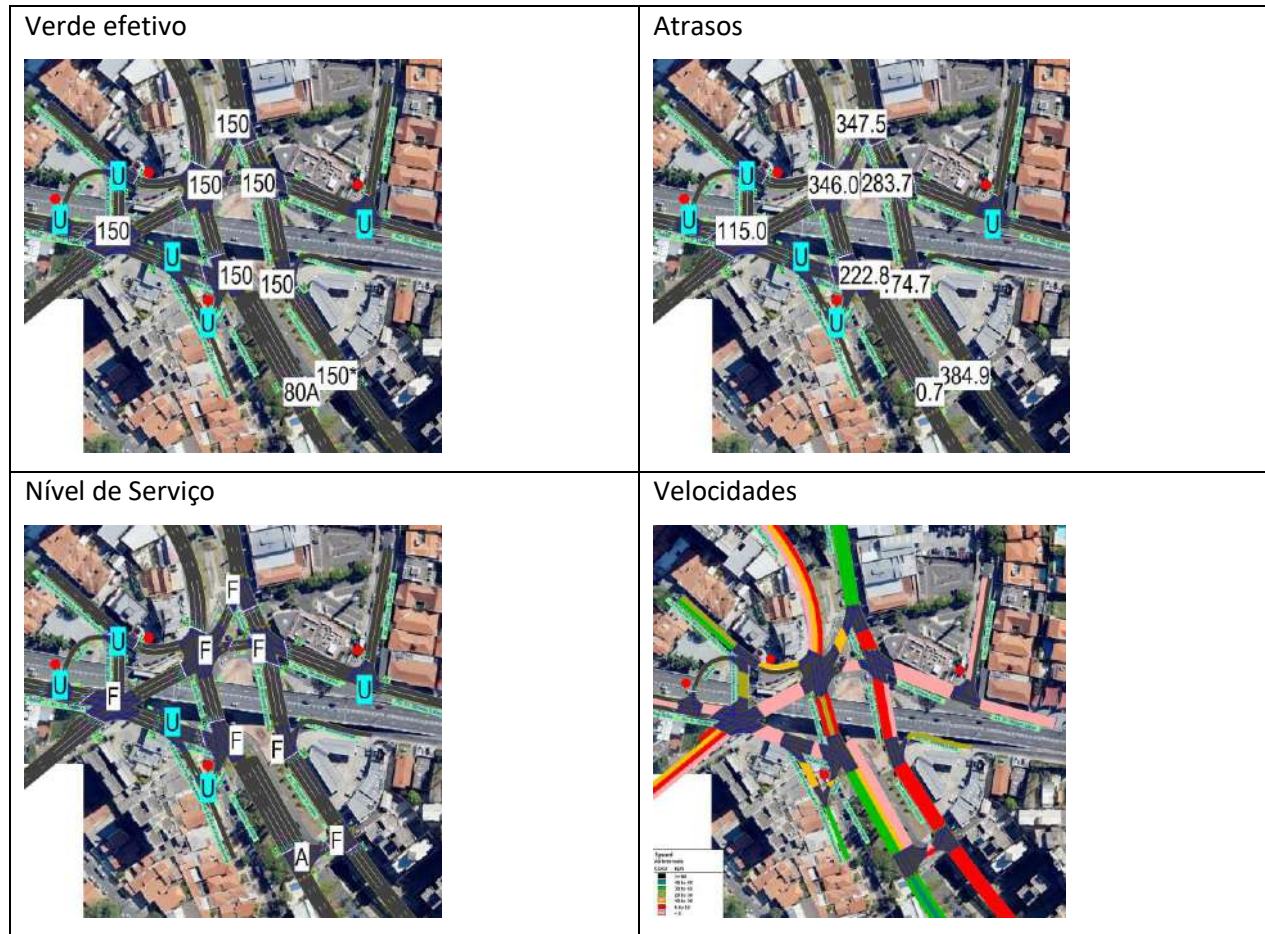


Figura 141 - Av. Princesa D'Oeste x Av. Souza Campos - tarde

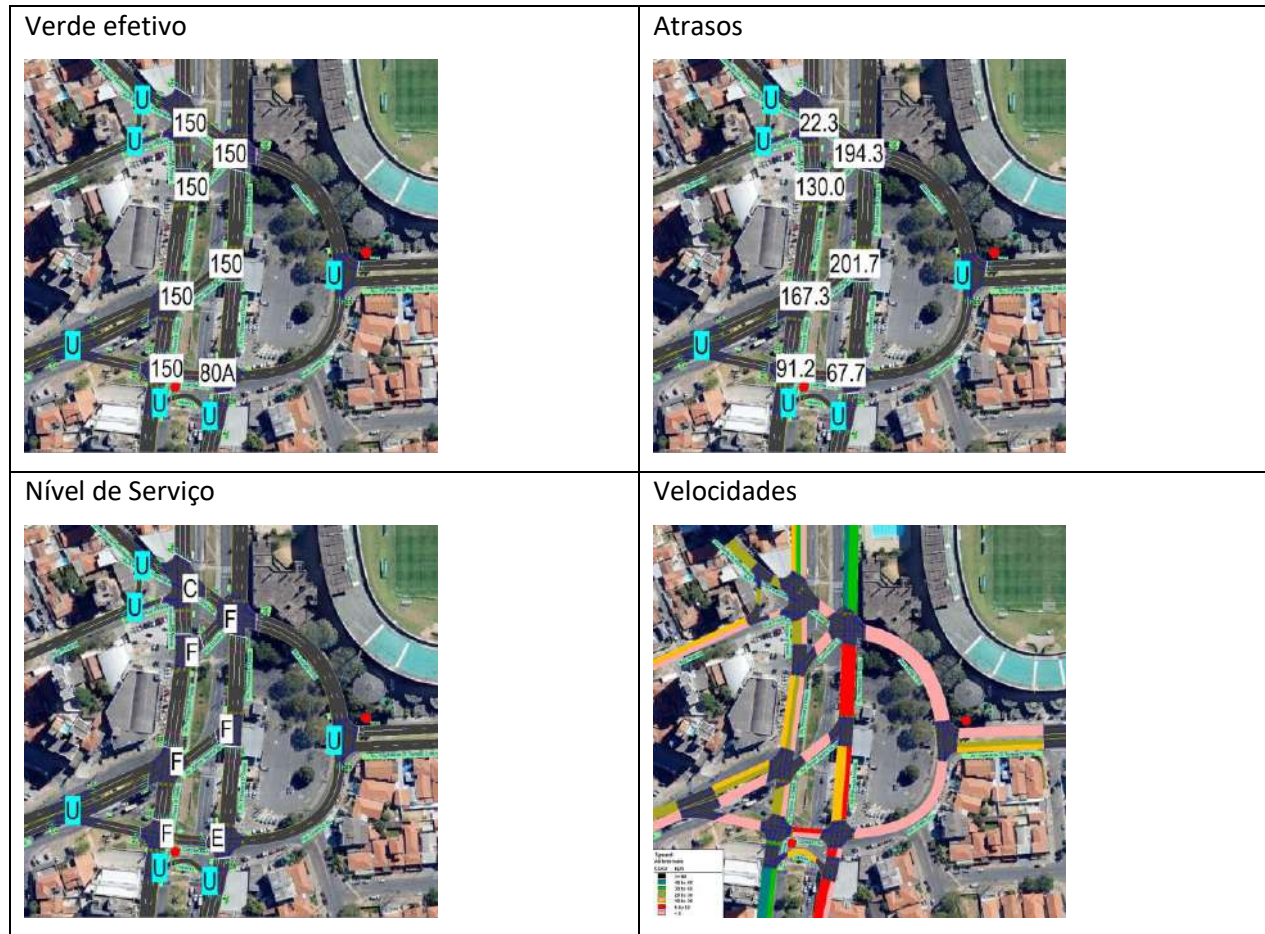


Figura 142 - Av. Princesa D'Oeste x Av. Conde D'Eu - tarde

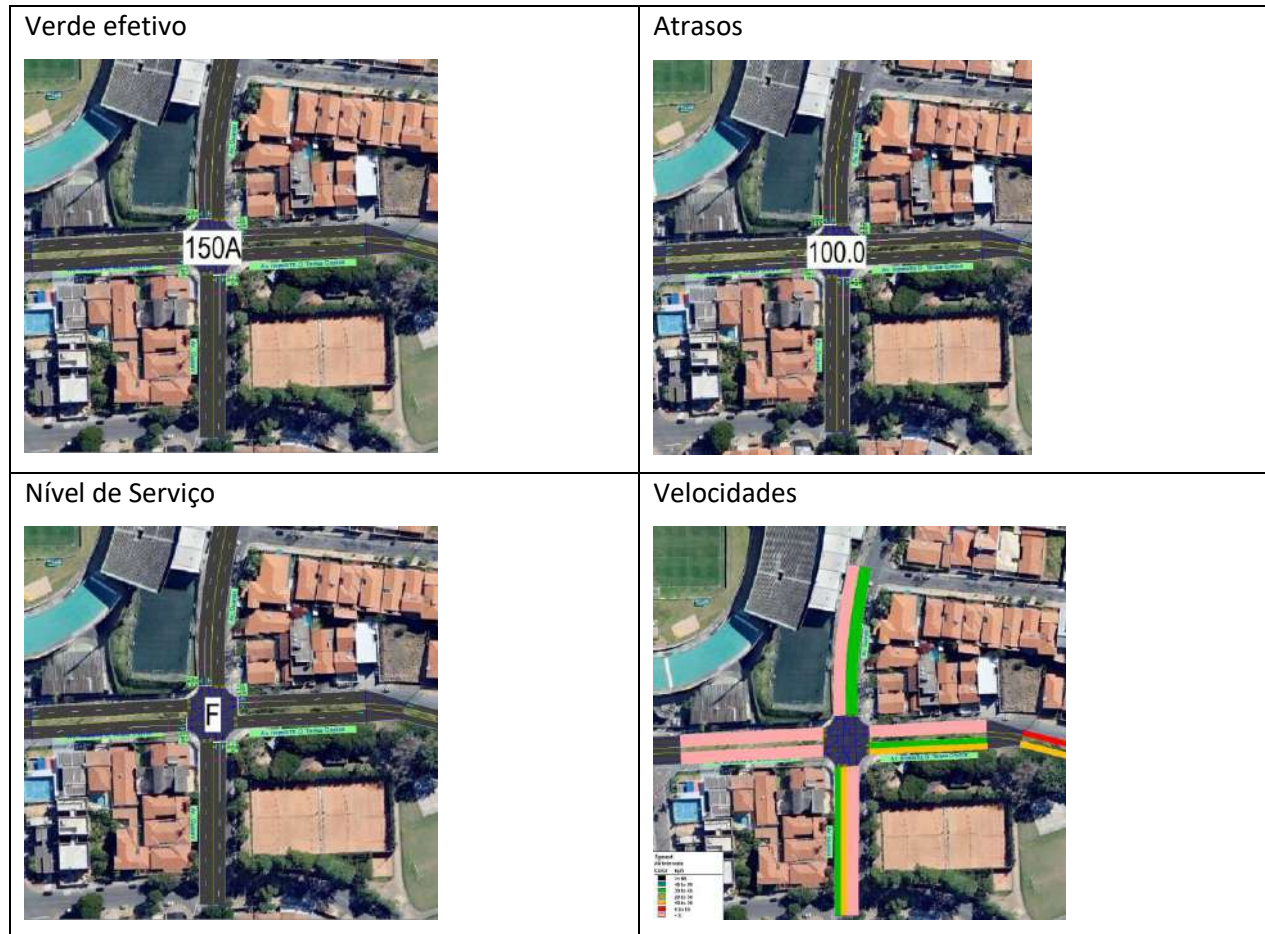


Figura 143 - Av. Imperatriz Tereza Cristina x Av. Guarani - tarde



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Abaixo segue figuras resumo contendo o nível de serviço e a relação V/C da situação após implantação do empreendimento no ano de 2022.



Figura 146 - VHP manhã, NS e V/C - ano 2022 - otimizado

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Figura 147 - VHP manhã, NS e V/C - ano 2022-otimizado

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Abaixo segue tabela resumo das condições dos indicadores de operação do sistema viário desde a situação atual (ano 2016), a situação de plena operação do empreendimento (2022), e após a otimização semafórica com inclusão de sistema atuado e coordenado.

| nó | HORA PICO MANHÃ | | | 2016 | | | 2022 | | | variação % dos atrasos | 2022 otimizado | | | variação % dos atrasos |
|------------------|-------------------------------------|-----------------------------------|--|------|--------|------|------|--------|------|------------------------|----------------|--------|------|------------------------|
| | via 1 | via 2 | via 3 | NS | atraso | v/c | NS | atraso | v/c | | NS | atraso | v/c | |
| SEMAFORIZADOS | | | | | | | | | | | | | | |
| 45 | Rua General Marcondes Salgado | Av. Dr. Moraes Salles | | C | 20,2 | 0,81 | C | 26,6 | 0,95 | 31,7% | E | 65 | 0,94 | 144,0% |
| 17 | Rua General Marcondes Salgado | Av. José de Souza Campos | Rua Coronel Francisco Andrade Coutinho | F | 126,6 | 0,81 | F | 153,1 | 0,99 | 20,9% | F | 87,3 | 0,88 | -43,0% |
| 54 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | F | 249,8 | 1,03 | F | 274,4 | 1,24 | 9,8% | F | 93,5 | 1,16 | -65,9% |
| 28 | Av. Princesa D'Oeste | | | A | 3,8 | 0,49 | A | 5,5 | 0,58 | 44,7% | A | 0,4 | 0,5 | -92,7% |
| 7 | Av. Princesa D'Oeste | | | F | 229,9 | 1,63 | F | 450,5 | 1,92 | 96,0% | F | 155,4 | 1,31 | -65,5% |
| 42 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | F | 112,3 | 0,93 | F | 201,6 | 1,09 | 79,5% | F | 88,4 | 0,95 | -56,2% |
| 43 | Av. José de Souza Campos | Av. Dr. Moraes Salles | | F | 95,1 | 0,8 | F | 142 | 0,95 | 49,3% | F | 132,5 | 0,72 | -6,7% |
| 66 | Av. José de Souza Campos | | | F | 469,7 | 1,99 | F | 478,4 | 2,34 | 1,9% | F | 152,5 | 1,32 | -68,1% |
| 6 | Av. Princesa D'Oeste | Rua Conde D'Eu | Rua Barão de Paranapanema | B | 15,7 | 0,67 | C | 23,5 | 0,93 | 49,7% | B | 11,9 | 0,77 | -49,4% |
| 63 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 228,4 | 0,61 | F | 256,8 | 0,83 | 12,4% | D | 38,8 | 0,94 | -84,9% |
| 5 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 118,3 | 0,8 | F | 194,8 | 1,07 | 64,7% | D | 37,1 | 0,92 | -81,0% |
| 4 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | Rua Conde D'Eu | B | 15,9 | 0,88 | D | 36,2 | 1,02 | 127,7% | D | 35,3 | 0,85 | -2,5% |
| 25 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 160,7 | 1,65 | F | 362,5 | 2,52 | 125,6% | E | 53,7 | 1,05 | -85,2% |
| 62 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 281,7 | 0,73 | F | 284,4 | 0,88 | 1,0% | E | 64,7 | 0,8 | -77,3% |
| 26 | Rua Conde D'Eu | Av. Princesa D'Oeste | | F | 154 | 0,95 | F | 274,6 | 1,41 | 78,3% | F | 242,9 | 1,2 | -11,5% |
| 2 | Av. Guarani | Av. Imperatriz D. Tereza Cristina | | F | 116,4 | 1,39 | F | 171,5 | 1,62 | 47,3% | F | 83,4 | 1,06 | -51,4% |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 123,7 | 0,98 | F | 153,3 | 1,15 | 23,9% | F | 176,7 | 1,27 | 14,3% |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 243,2 | 2,05 | F | 269,8 | 2,5 | 10,9% | F | 286,9 | 1,62 | 6,3% |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | F | 124,3 | 1,5 | F | 165,8 | 1,74 | 33,4% | C | 34,5 | 0,85 | -79,2% |
| NÃO SEMAFORIZADO | | | | | | | | | | | | | | |
| 71 | Av. Guarani | Av. Dr. Moraes Salles | | B | 10,5 | 1,14 | D | 34,6 | 1,77 | 229,5% | D | 34,6 | 1,77 | 0,0% |
| ROTATÓRIA | | | | | | | | | | | | | | |
| 11 | Av. Claudio Celestino Toledo Soares | Av. Imperatriz D. Tereza Cristina | | C | 17,6 | 0,84 | E | 40,5 | 1,08 | 130,1% | E | 40,5 | 1,08 | 0,0% |



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| HORA PICO TARDE | | | 2016 | | | 2022 | | | variação % dos atrasos | 2022 otimizado | | | variação % dos atrasos | |
|------------------|-------------------------------------|-----------------------------------|--|----|--------|------|----|--------|------------------------|----------------|----|--------|------------------------|--------|
| nó | via 1 | cruzamento via 2 | via 3 | NS | atraso | v/c | NS | atraso | | v/c | NS | atraso | | v/c |
| SEMAFORIZADOS | | | | | | | | | | | | | | |
| 45 | Rua General Marcondes Salgado | Av. Dr. Moraes Salles | | D | 37,3 | 1,06 | D | 52,6 | 1,23 | 41,0% | F | 115 | 0,85 | 110,0% |
| 17 | Rua General Marcondes Salgado | Av. José de Souza Campos | Rua Coronel Francisco Andrade Coutinho | F | 235,9 | 1,53 | F | 339,5 | 1,83 | 43,9% | F | 346 | 1,16 | 1,9% |
| 54 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | F | 333,2 | 1,53 | F | 358,1 | 1,84 | 7,5% | F | 222,8 | 1,45 | -37,8% |
| 28 | Av. Princesa D'Oeste | | | A | 7,3 | 0,65 | B | 15,5 | 0,76 | 112,3% | A | 0,7 | 0,66 | -95,5% |
| 7 | Av. Princesa D'Oeste | | | F | 381,4 | 2,3 | F | 565,7 | 2,86 | 48,3% | F | 384,9 | 1,81 | -32,0% |
| 42 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | E | 55,2 | 0,98 | F | 97,9 | 1,18 | 77,4% | F | 174,7 | 1,03 | 70,4% |
| 43 | Av. José de Souza Campos | Av. Dr. Moraes Salles | | F | 146,8 | 0,96 | F | 192 | 1,17 | 30,8% | F | 283,7 | 0,93 | 42,0% |
| 66 | Av. José de Souza Campos | | | F | 540,4 | 2,23 | F | 613,2 | 2,7 | 13,5% | F | 347,5 | 1,36 | -43,3% |
| 6 | Av. Princesa D'Oeste | Rua Conde D'Eu | Rua Barão de Paranapanema | B | 16,7 | 0,72 | C | 26,9 | 0,95 | 61,1% | C | 22,3 | 0,86 | -17,1% |
| 63 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 199,4 | 0,79 | F | 251,1 | 1,4 | 25,9% | F | 130 | 1,13 | -48,2% |
| 5 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 106,1 | 0,85 | F | 156,7 | 1,25 | 47,7% | F | 167,3 | 1,16 | 6,0% |
| 4 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | Rua Conde D'Eu | F | 112,6 | 1,18 | F | 142,4 | 1,13 | 26,5% | F | 91,2 | 0,98 | -36,0% |
| 25 | Av. Princesa D'Oeste | Rua Conde D'Eu | | F | 87,3 | 1,27 | F | 231,5 | 1,87 | 165,2% | E | 67,7 | 1,1 | -70,8% |
| 62 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | F | 227,3 | 0,85 | F | 196,4 | 1,05 | -13,6% | F | 201,7 | 0,81 | 2,7% |
| 26 | Rua Conde D'Eu | Av. Princesa D'Oeste | | F | 86,4 | 1,26 | F | 334,5 | 2,27 | 287,2% | F | 194,3 | 1,1 | -41,9% |
| 2 | Av. Guarani | Av. Imperatriz D. Tereza Cristina | | C | 33,2 | 0,89 | F | 185,5 | 1,97 | 458,7% | F | 100 | 1,16 | -46,1% |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | D | 49 | 1,11 | F | 147,7 | 1,43 | 201,4% | F | 152,7 | 1,29 | 6,6% |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 138,3 | 0,8 | F | 217,7 | 1,21 | 57,4% | F | 139,6 | 1,1 | -35,9% |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | D | 45,8 | 1,1 | E | 59,2 | 1,28 | 29,3% | B | 17,2 | 0,73 | -70,9% |
| NÃO SEMAFORIZADO | | | | | | | | | | | | | | |
| 71 | Av. Guarani | Av. Dr. Moraes Salles | | A | 2,7 | 0,81 | D | 27,7 | 1,82 | 925,9% | D | 27,7 | 1,82 | 0,0% |
| ROTATÓRIA | | | | | | | | | | | | | | |
| 11 | Av. Claudio Celestino Toledo Soares | Av. Imperatriz D. Tereza Cristina | | C | 23,2 | 0,94 | F | 99,3 | 1,37 | 328,0% | F | 99,3 | 1,37 | 0,0% |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Pela tabela pode-se verificar uma redução de atrasos em cerca de 66,6% do total dos cruzamentos impactados.

Os cruzamentos que ainda sofrerão com o impacto do empreendimento são os nós 45, 17, 42, 43, 5, 62 e 70.

b. Implantação de sentido único de circulação

Pensando no aumento da capacidade das vias do entorno, está prevista a implantação de sentido único de circulação na Av. Guarani no trecho entre a Av. Dr. Moraes Salles e a Rua Rafael Andrade Duarte.

Sentido único de circulação também na Rua Rafael Andrade Duarte entre a Av. Guarani e a Rua Artur de Freitas Leitão e na Rua Dr. Paulo Castro Pupo Nogueira entre a Rua Artur Freitas Leitão e Av. Dr. Moraes Salles.

Para acesso ao empreendimento deverá ser prevista implantação de mão única na Rua Roberto Gomes Pedrosa no trecho entre a Rua Alaíde Nascimento de Lemos.

c. Proibição de estacionamento

A proibição de estacionamento se fará necessária na aproximação da Av. Claudio Celestino Toledo Soares com a Rua Me. Maria Santa Margarida, nas aproximações da rotatória entre a Av. Imperatriz Dona Tereza Cristina e Av. Claudio Celestino Toledo Soares e na aproximação da Rua Proença com a Av. Princesa D'Oeste.

d. Proibição de conversão à esquerda

A conversão à esquerda dos veículos que trafegam pela Av. Princesa D'Oeste sentido Sul, com destino a Rua Conde D'Eu, também deverá ser proibida. Para tal está prevista uma reconfiguração geométrica na Av. Ayrton Senna para criar viabilizar este retorno.

A conversão à esquerda da Av. Imperatriz Dona Tereza Cristina deverá ser proibida no acesso para o empreendimento no cruzamento com a Rua Roberto Gomes Pedrosa

D. Medidas estruturais de aumento de capacidade

As medidas estruturais requerem intervenções físicas no entorno. Sabe-se que quando o sistema principal se encontra saturado, é natural que os condutores procurem novas rotas para servirem como alternativas para acesso a região de destino. Atualmente com os aplicativos de celulares e GPS é possível ter a informação em tempo real dos congestionamentos, e alguns deles traçam as rotas alternativas para seus usuários.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Tendo essa visão, foram elaboradas rotas mitigadoras de acesso/saídas do empreendimento com a intenção de não somente servirem a ele, como também a todo o sistema de transporte da região impactada.

Essas rotas tem como premissa, desviarem do cruzamento com maior demanda que fica situado no cruzamento entre as Av. Princesa D'Oeste, Av. José de Souza Campos e Rua General Marcondes Salgado, mais conhecido como Laurão.

As rotas Norte aliviarão os nós 17, 45, 42 e 43 pela Av. José de Souza Campos e Av. Princesa D'Oeste e o nó 70 pela Av. Marcondes Salgado.

Estas rotas preveem a abertura do canteiro central e consequente semaforização da Av. Moraes Salles em dois locais. Um na altura da Rua Rafael de Andrade Duarte e outra abertura na altura da Rua Dr. Paulo Castro Pupo Nogueira.

A abertura com a Rua Rafael de Andrade Duarte servirá como saída do empreendimento para os veículos com destino à Av. José de Souza Campos e Av. Dr. Jesuíno Marcondes Salgado. Já a abertura com a Rua Dr. Paulo Castro Pupo Nogueira servirá de rota de acesso ao empreendimento para as duas rotas norte, além da rota leste dos veículos provenientes da Av. Dr. Moraes Salles.

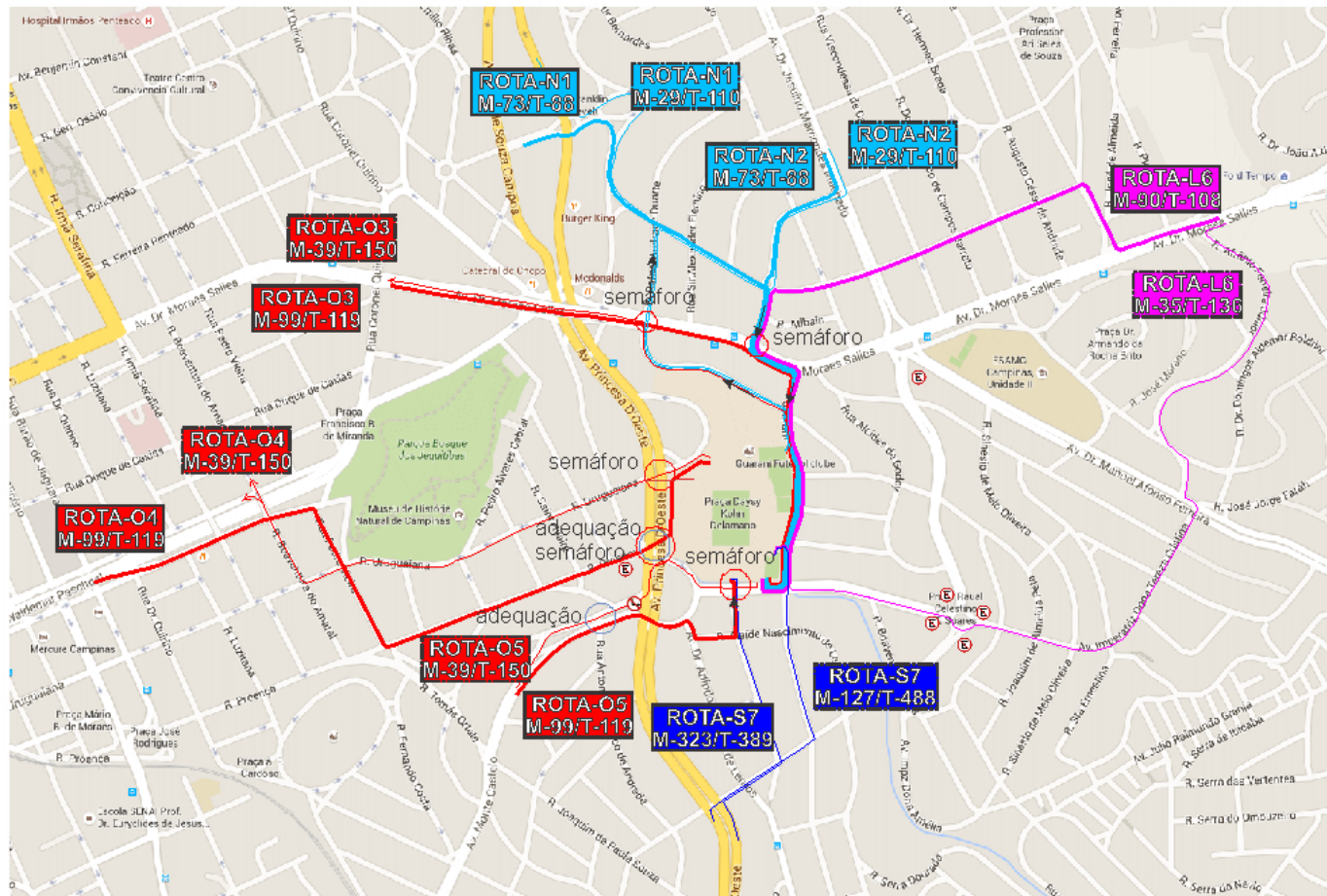
Na rota oeste a abertura da Av. Princesa D'Oeste está prevista com a Rua Uruguaiana e servirá como acesso para a Av. Aquidaban. Há também previsão de reconfiguração geométrica e semafórica no cruzamento da Av. Princesa D'Oeste com a Rua Proença. Esta rota alternativa aliviará os nós 5 e 62.

Para acesso direto ao empreendimento pela rota sul, também está prevista a implantação de conjunto semafórico no cruzamento entre a Av. Imperatriz Dona Tereza Cristina e Rua Roberto Gomes Pedrosa.

Abaixo segue figura contendo essas rotas, as intervenções geométricas, semafóricas e de sentidos de circulação. Está também indicada a previsão de demanda do polo gerador se apenas estas rotas fossem utilizadas para acesso de todos os usos do empreendimento.



Todos os usos



| | | | | | | | | | | | | | | | | |
|--|--------------------------------|--|------------------------------|--------------------|--|---------------|--|----------------------|--|------------------------|--|-----------------------------|--|------------------------|--|-------------------------|
| | entradas manhã/tarde | | saídas manhã/tarde | rotas norte | | semáforo novo | | adequação geométrica | | proibição de conversão | | proibição de estacionamento | | circulação via interna | | alteração de circulação |
| | | | | rotas oeste | | | | | | | | | | | | |
| | | | | rotas sul | | | | | | | | | | | | |
| | | | | rotas leste | | | | | | | | | | | | |

Sistema viário projetado
 Ano 2022

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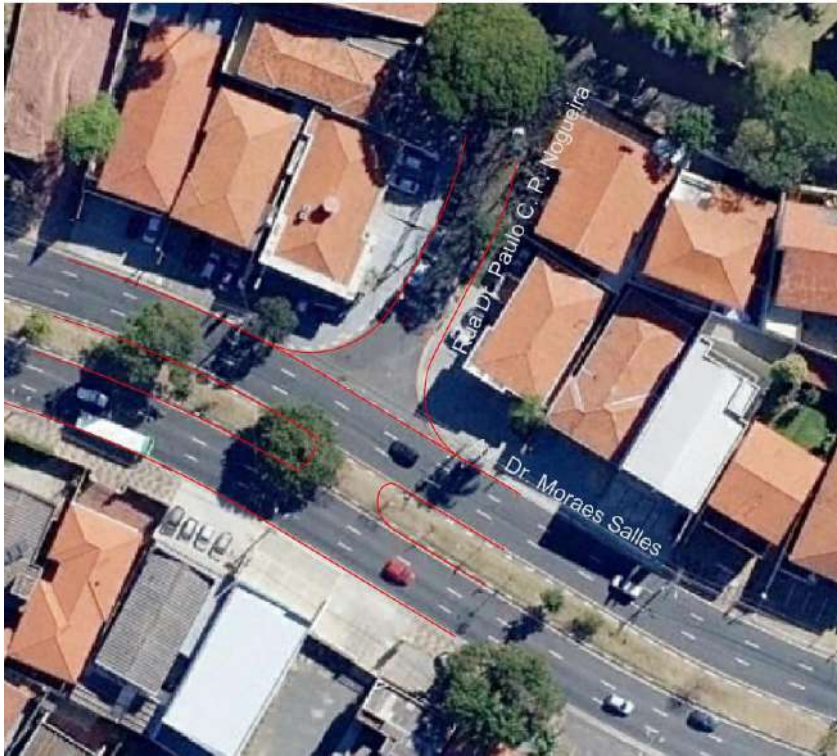


Figura 148 - abertura de canteiro Rua Dr. Paulo C. P. Nogueira

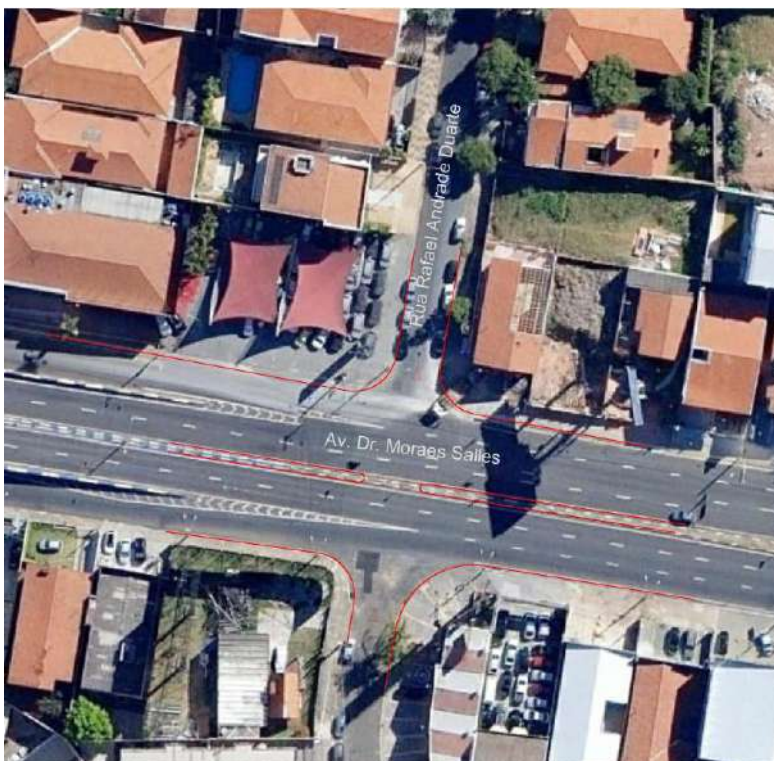


Figura 149 - abertura de canteiro Rua Rafael Andrade Duarte



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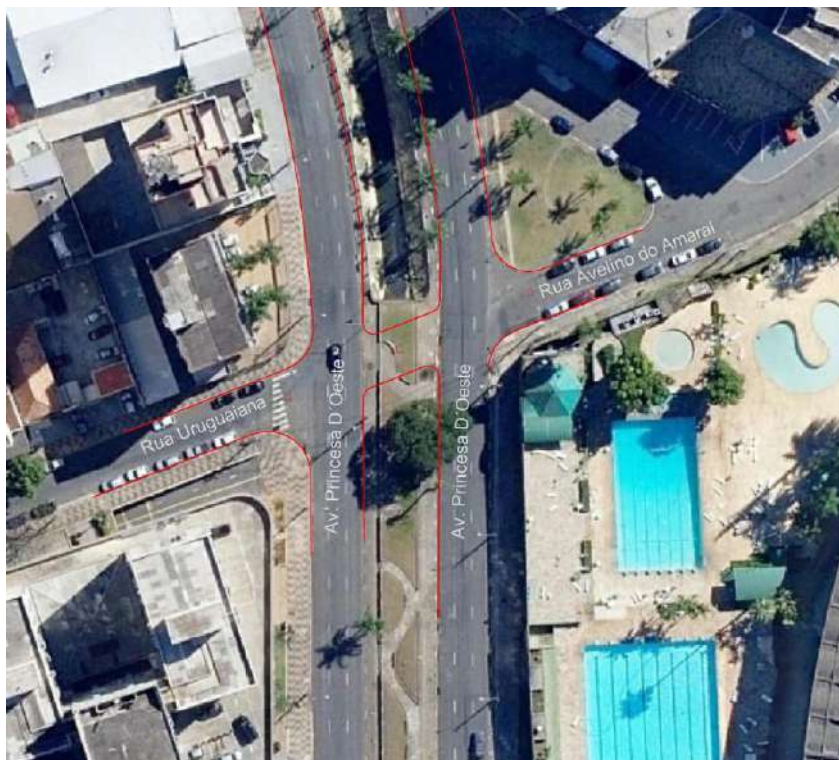


Figura 150 - abertura de canteiro Rua Uruguiana

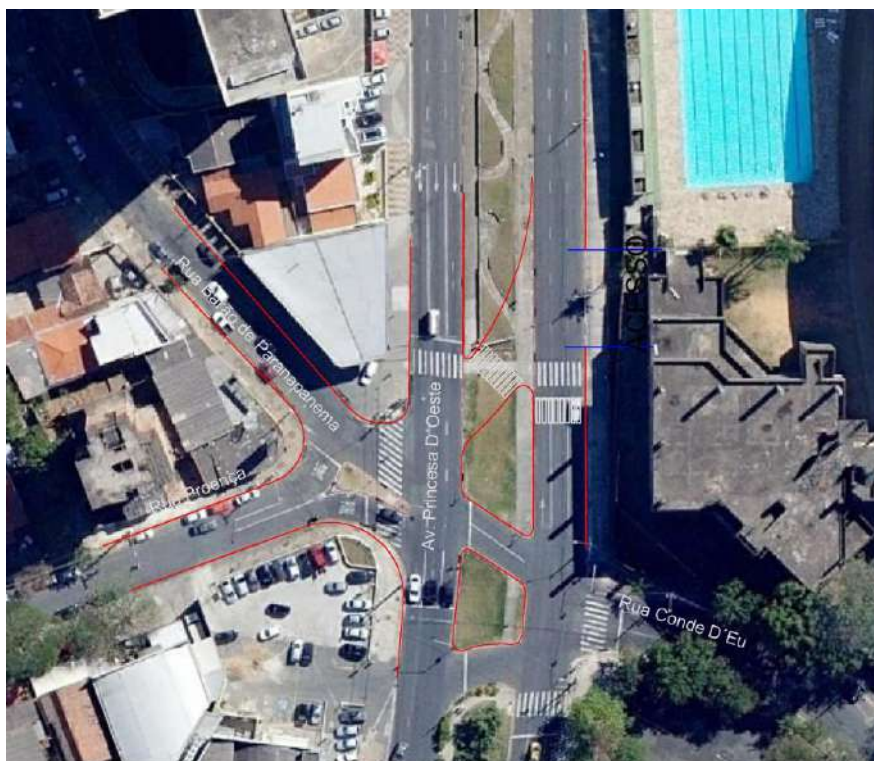


Figura 151 - adequação de geometria e semáforo Rua Proença



Figura 152 - adequação de geometria Av. Ayrton Senna

E. Avaliação das condições de acesso e de circulação de veículos e de pedestres no entorno

Atualmente a largura do passeio existente para o tráfego de pedestres, atende de maneira satisfatória o volume e possui capacidade suficiente para absorver a demanda do empreendimento, já que o uso atual como estádio de futebol, gera em dias de jogos um volume bem acima do dimensionado. Portanto a troca de uso do solo não gerará impacto negativo na ocupação do passeio.

F. Avaliação dos impactos nos serviços de transporte coletivo na área de influência do empreendimento

A localização dos pontos de parada e as linhas que as abastecem, indicam que haverá 5 pontos de parada que atenderão as necessidades de deslocamento. O local é servido por 9 linhas municipais e 2 linhas intermunicipais.

O maior carregamento previsto será no pico da tarde com 927 viagens saindo. A proporção de viagens externas é de 2,25%, portanto, se utilização do transporte coletivo intermunicipal 21 viagens que serão comportadas pelo sistema atual.

As 906 viagens faltantes serão distribuídas pelas 9 linhas de transporte municipal, portanto aproximadamente 101 viagens por hora. A frequência das linhas segue abaixo:

Linha 125 – 14 minutos, Linha 307 – 60 minutos, Linha 308 – 60 minutos, Linha 364 – 9 minutos, Linha 368 – 16 minutos, Linha 378 – 50 minutos, Linha 385 – 5 minutos, Linha 395 – 37 minutos, Linha 397 – 20 minutos.

A frequência média das linhas é de 30 minutos, portanto 51 viagens a cada 30 minutos que serão distribuídas pelos 5 pontos de parada. Isso resulta em 10 viagens/ponto de parada/linha/30 minutos ou 20 viagens/ponto de parada/linha/hora.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Estima-se que este acréscimo no número de viagens por transporte coletivo é compatível com o atendimento da atual estrutura do sistema de ônibus.

Indica-se a padronização de pelo menos dois tipos de pontos de parada. Os pontos predominantemente de desembarque, poderão ser sinalizados com placas de regulamentação e mensagem complementar. Para os demais pontos de embarque, indica-se a construção de abrigos.

O ponto de parada de taxi existente na Av. Ayrton Senna da Silva deverá ser deslocado para defronte ao shopping/hotel, pois a demanda por este tipo de modal aumentará e a nova localização oferecerá condições mais seguras e confortáveis aos usuários.

G. Avaliação de ocorrência de impacto na fase de obras

Durante a fase de obras de demolição da estrutura existente, o tráfego de caminhões no entorno será aumentado. Para minimizar estes impactos, as operações de carga e descarga irão ocorrer fora dos horários de pico.

Durante a fase de construção das obras das edificações todas as operações de carga e descarga serão realizadas em áreas internas ao lote, os pneus dos caminhões provenientes do lote (em especial na fase de movimentação de terra) serão lavados antes de ingressar na via afim de evitar acúmulo de terra na pista.



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

7. CONCLUSÕES

Verificamos que os indicadores de qualidade de operação de tráfego em todas as interseções avaliadas irão se manter nos patamares atuais de operação ou serão melhoradas com as medidas mitigadoras propostas.

Sob a ótica da mobilidade sustentável, além das melhorias de desempenho do sistema viário, com a implantação das medidas mitigadoras, haverá também melhoria de qualidade ambiental com a implantação das medidas que pode ser resumida no seguinte quadro:

| Hora pico Manhã | | sem medidas mitigadoras | com medidas mitigadoras | % economia |
|-------------------------|------|-------------------------|-------------------------|------------|
| consumo de combustível | l | 12314 | 7725 | 37,3% |
| Economia de combustível | Km/l | 0,8 | 1,2 | 50,0% |
| Emissão de CO | kg | 229,04 | 143,68 | 37,3% |
| Emissão de Nox | kg | 44,21 | 27,73 | 37,3% |
| Emissão de VOC | kg | 52,83 | 33,14 | 37,3% |
| Hora pico Manhã | | | | |
| consumo de combustível | l | 15718 | 12652 | 19,5% |
| Economia de combustível | Km/l | 0,7 | 0,9 | 28,6% |
| Emissão de CO | kg | 292,35 | 235,32 | 19,5% |
| Emissão de Nox | kg | 56,43 | 45,42 | 19,5% |
| Emissão de VOC | kg | 67,43 | 54,28 | 19,5% |

Por fim, o presente estudo conclui que a aprovação do empreendimento da Edo Rocha Arquiteturas em questão é VIÁVEL, uma vez que as medidas necessárias para a mitigação de impacto nos sistemas de trânsito e transportes, foram contempladas conforme quadro síntese abaixo:



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QUADRO SÍNTESE

| nó | CRUZAMENTO | | | MEDIDA MITIGADORA |
|----|-------------------------------------|------------------------------------|--|--|
| | via 1 | via 2 | via 3 | |
| 45 | Rua General Marcondes Salgado | Av. Dr. Moraes Salles | | semaforização atuada e coordenada |
| 17 | Rua General Marcondes Salgado | Av. José de Souza Campos | Rua Coronel Francisco Andrade Coutinho | semaforização atuada e coordenada |
| 54 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | semaforização atuada e coordenada |
| 28 | Av. Princesa D'Oeste | | | semaforização atuada e coordenada |
| 7 | Av. Princesa D'Oeste | | | semaforização atuada e coordenada |
| 42 | Av. Princesa D'Oeste | Av. José de Souza Campos | Av. Dr. Moraes Salles | semaforização atuada e coordenada |
| 43 | Av. José de Souza Campos | Av. Dr. Moraes Salles | | semaforização atuada e coordenada |
| 66 | Av. José de Souza Campos | | | semaforização atuada e coordenada |
| 6 | Av. Princesa D'Oeste | Rua Conde D'Eu | Rua Barão de Paranapanema | adequação geométrica |
| 6 | Av. Princesa D'Oeste | Rua Conde D'Eu | | semaforização atuada e coordenada |
| 63 | Av. Princesa D'Oeste | Rua Conde D'Eu | | semaforização atuada e coordenada |
| 5 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | semaforização atuada e coordenada |
| 4 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | Rua Conde D'Eu | semaforização atuada e coordenada |
| 4 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | Rua Conde D'Eu | proibição de conversão à esquerda |
| 25 | Av. Princesa D'Oeste | Rua Conde D'Eu | | semaforização atuada e coordenada |
| 62 | Av. Princesa D'Oeste | Av. Ayrton Senna da Silva | | semaforização atuada e coordenada |
| 26 | Rua Conde D'Eu | Av. Princesa D'Oeste | | semaforização atuada e coordenada |
| 2 | Av. Guarani | Av. Imperatriz D. Tereza Cristina | | semaforização atuada e coordenada |
| 2 | Av. Guarani | Av. Imperatriz D. Tereza Cristina | | proibição de estacionamento na aproximação semafórica |
| | Av. Guarani | | | sentido único de circulação entre Av. Dr. Moraes Salles e a Av. Imperatriz D. Tereza Cristina |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | semaforização atuada e coordenada |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | semaforização atuada e coordenada |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | semaforização atuada e coordenada |
| | Av. Dr. Moraes Salles | Rua Rafael de Andrade Duarte | | semaforização atuada e coordenada |
| | Av. Dr. Moraes Salles | Rua Rafael de Andrade Duarte | | adequação geométrica |
| | Rua Rafael de Andrade Duarte | | | sentido único de circulação entra a Av. Guarani e a Rua Dr. Freitas Leitão |
| | Av. Dr. Moraes Salles | Rua Dr. Paulo Castro Pupo Nogueira | | semaforização atuada e coordenada |
| | Av. Dr. Moraes Salles | Rua Dr. Paulo Castro Pupo Nogueira | | adequação geométrica |
| | Rua Dr. Paulo Castro Pupo Nogueira | | | sentido único de circulação entre a Rua Artur Freitas Leitão e Av. Dr. Moraes Salles |
| | Av. Princesa D'Oeste | Rua Uruguaiana | | adequação geométrica |
| | Av. Princesa D'Oeste | Rua Uruguaiana | | semaforização atuada e coordenada |
| | Av. Imperatriz D. Tereza Cristina | Rua Roberto Gomes Pedrosa | | semaforização atuada e coordenada |
| | Rua Roberto Gomes Pedrosa | | | sentido único de circulação entre a Rua Alaíde Nascimento de Lemos e Av. Imperatriz D. Tereza Cristina |
| | Av. Ayrton Senna da Silva | Av. Monte Castelo | | adequação geométrica |
| | Rua Paulo Proença | | | proibição de estacionamento na aproximação semafórica |
| | Av. Claudio Celestino Toledo Soares | Av. Imperatriz D. Tereza Cristina | | proibição de estacionamento na aproximação da rotatória |
| | Av. Claudio Celestino Toledo Soares | Rua Me Maria Santa Margarida | | proibição de estacionamento na aproximação |

Pedra Bela, 9 de Maio de 2016

Engº Agenor Cremonese Júnior

CREA: 0600436487

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AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

ANEXO 1 – ROTAS E FREQUENCIAS DO TRANSPORTE COLETIVO



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Abaixo segue itinerário das linhas de transporte coletivo municipal e intermunicipal contidos na área de influência imediata ao empreendimento

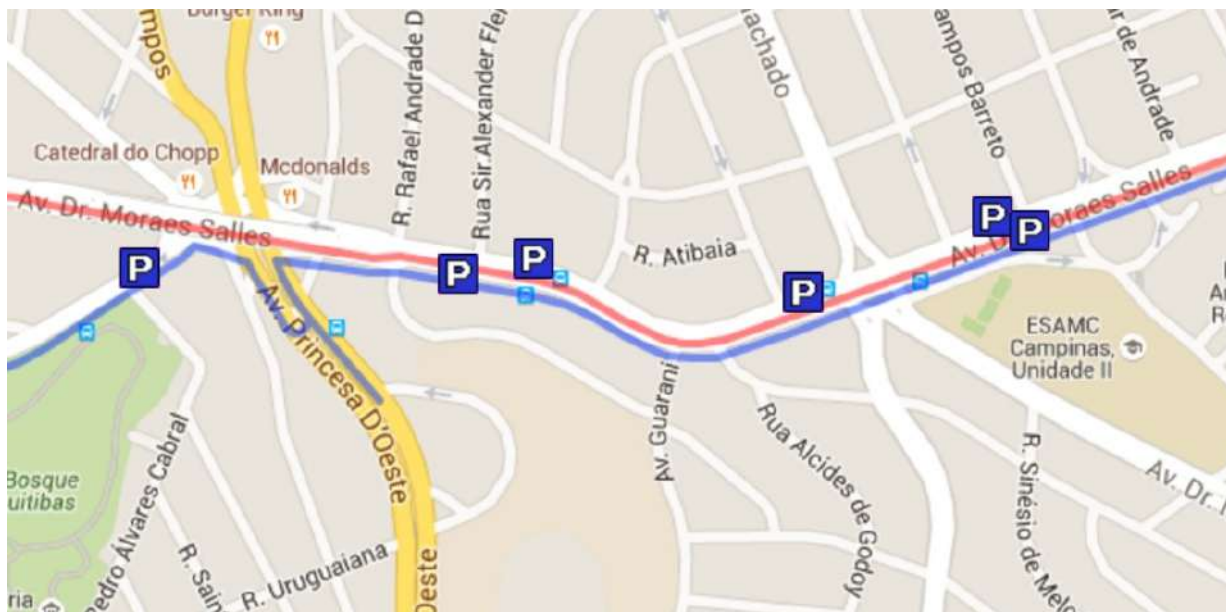


Figura 1 - itinerário Linha 125



Figura 2 - itinerário linha 307



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

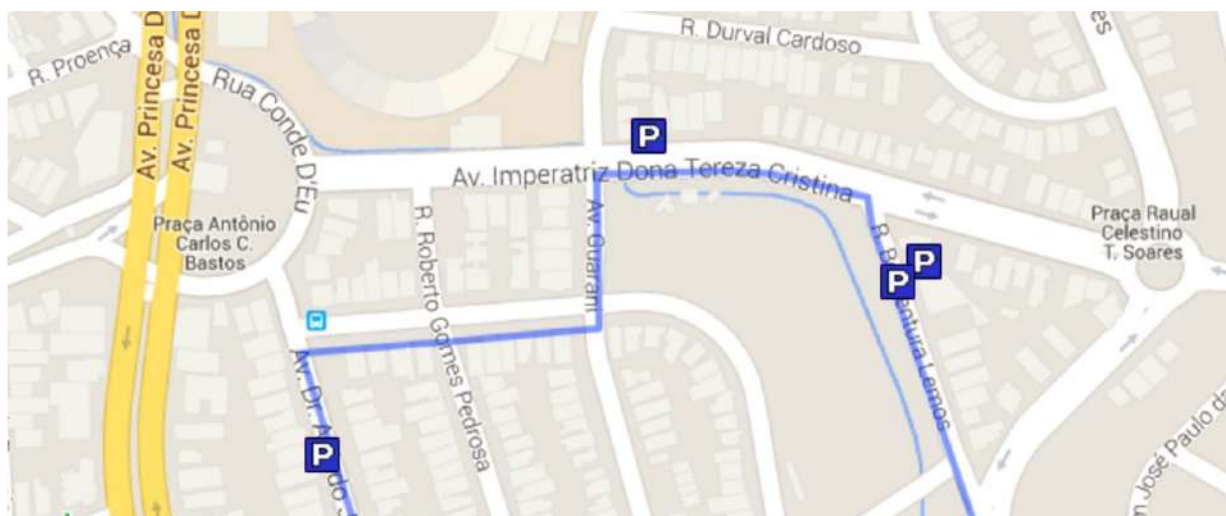


Figura 3 - itinerário linha 308



Figura 4 - itinerário linha 364



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

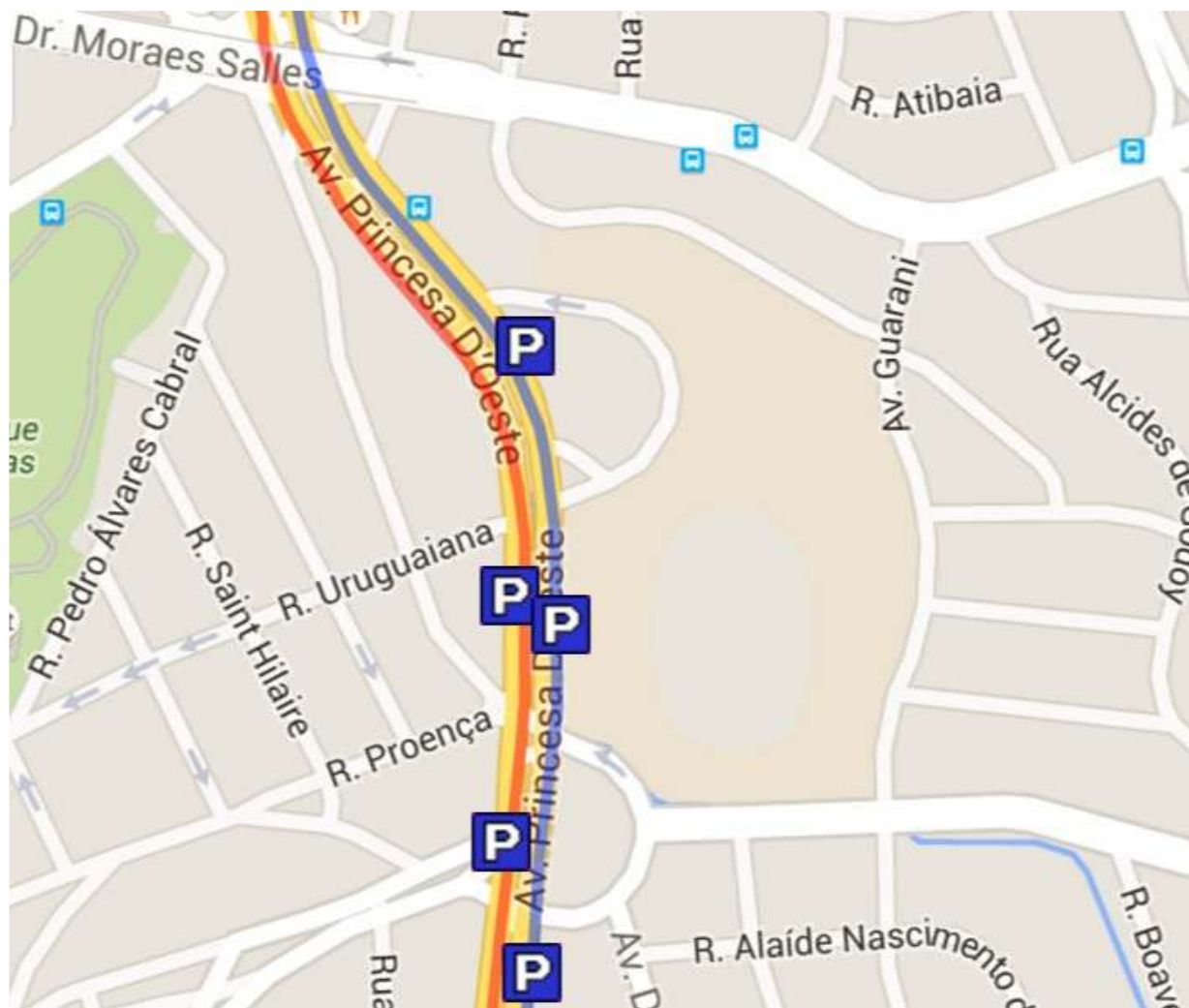


Figura 5 - itinerário linha 368



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30



Figura 6 - itinerário linha 378

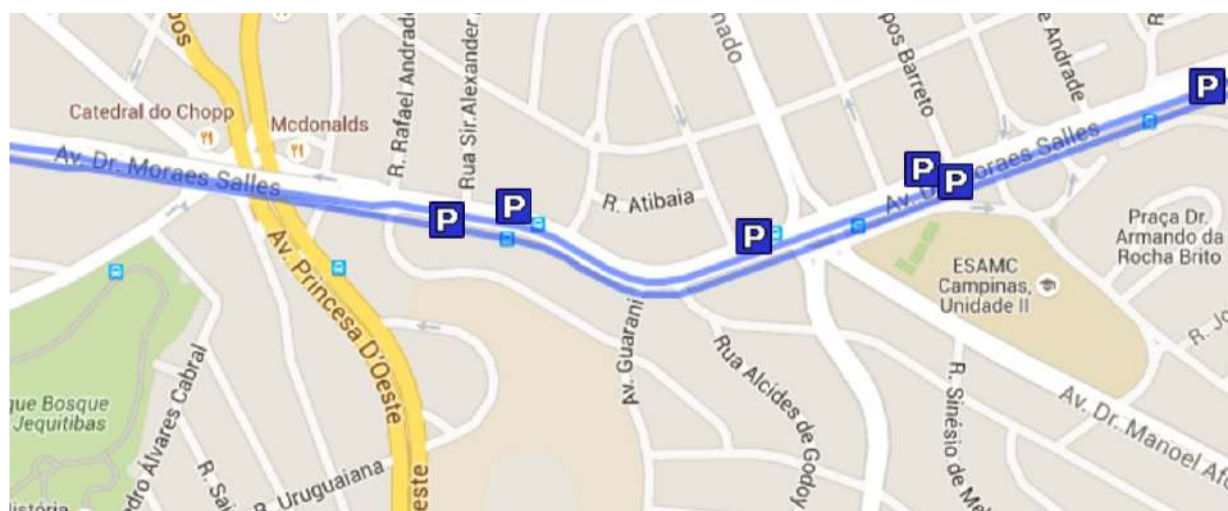


Figura 7 - itinerário linha 385



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30



Figura 8 - itinerário linha 395

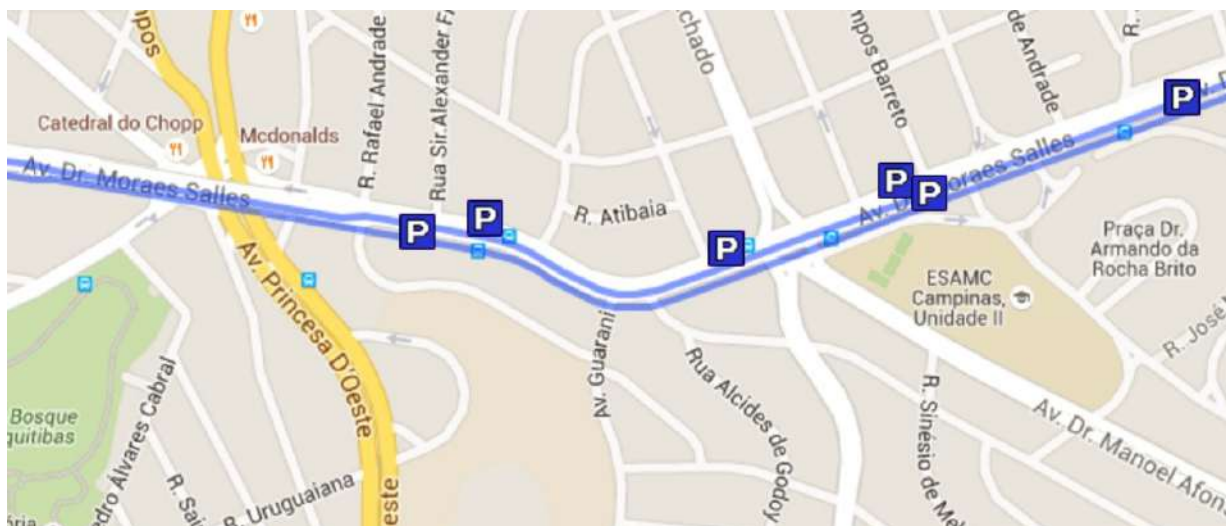


Figura 9 - itinerário linha 397


Linha 125 - TERMINAL OURO VERDE / SHOPPING IGUAATEMI (INCLUSIVO)

Esta linha está autorizada a operar sem a obrigatoriedade da presença do cobrador, e opera com 07 ve

Empresa: BONAVIDA I

Ida: SHOP. IGUAATEMI

Saindo de TERMINAL OURO VERDE
17,64 Km entre 44 a 49 minutos

Volta: TERM. OURO VERDE

Saindo de TERM SHOPPING IGUAATEMI
17,21 Km entre 44 a 49 minutos

Horários Útil (11 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:00 | 05:14 | 05:28 | 05:42 | 05:56 | 06:10 |
| 06:24 | 06:38 | 06:52 | 07:06 | 07:13 | 07:20 |
| 07:27 | 07:34 | 07:41 | 07:48 | 07:55 | 08:02 |
| 08:12 | 08:30 | 08:53 | 09:16 | 09:39 | 10:02 |
| 10:25 | 10:48 | 11:11 | 11:34 | 11:57 | 12:20 |
| 12:43 | 13:06 | 13:29 | 13:52 | 14:15 | 14:38 |
| 15:01 | 15:23 | 15:37 | 15:51 | 16:05 | 16:19 |
| 16:33 | 16:47 | 17:01 | 17:15 | 17:29 | 17:43 |
| 17:57 | 18:11 | 18:25 | 18:46 | 19:08 | 19:30 |
| 19:52 | 20:14 | 20:36 | 20:58 | 21:20 | 21:42 |
| 22:04 | 22:26 | 22:48 | 23:10 | | |

Horários Útil

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:48 | 06:02 | 06:16 | 06:30 | 06:44 | 06:58 |
| 07:12 | 07:26 | 07:40 | 07:54 | 08:08 | 08:22 |
| 08:36 | 08:50 | 09:04 | 09:15 | 09:38 | 10:01 |
| 10:24 | 10:47 | 11:10 | 11:33 | 11:56 | 12:19 |
| 12:42 | 13:05 | 13:28 | 13:51 | 14:14 | 14:37 |
| 15:00 | 15:23 | 15:46 | 16:11 | 16:25 | 16:39 |
| 16:53 | 17:07 | 17:21 | 17:35 | 17:49 | 18:03 |
| 18:17 | 18:31 | 18:45 | 18:59 | 19:13 | 19:30 |
| 19:52 | 20:14 | 20:36 | 20:58 | 21:20 | 21:42 |
| 22:10 | 22:26 | 22:48 | 23:10 | 23:32 | 23:54 |

Horários Sábado (5 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:00 | 05:19 | 05:38 | 05:57 | 06:16 | 06:35 |
| 06:54 | 07:13 | 07:32 | 07:51 | 08:10 | 08:29 |
| 08:48 | 09:07 | 09:37 | 09:56 | 10:15 | 10:34 |
| 10:53 | 11:12 | 11:31 | 11:50 | 12:09 | 12:28 |
| 12:47 | 13:06 | 13:22 | 13:44 | 14:06 | 14:28 |
| 14:50 | 15:12 | 15:34 | 15:56 | 16:18 | 16:40 |
| 17:02 | 17:24 | 17:46 | 18:08 | 18:30 | 19:08 |
| 19:30 | 19:52 | 20:14 | 20:36 | 20:58 | 21:20 |
| 21:42 | 22:04 | 22:26 | 22:48 | 23:10 | |

Horários Sábado

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:45 | 06:04 | 06:23 | 06:42 | 07:01 | 07:20 |
| 07:39 | 07:58 | 08:17 | 08:36 | 08:55 | 09:14 |
| 09:33 | 09:52 | 10:22 | 10:41 | 11:00 | 11:19 |
| 11:38 | 11:57 | 12:16 | 12:35 | 12:54 | 13:13 |
| 13:32 | 13:51 | 14:06 | 14:28 | 14:50 | 15:12 |
| 15:34 | 15:56 | 16:18 | 16:40 | 17:02 | 17:24 |
| 17:46 | 18:08 | 18:30 | 18:52 | 19:14 | 19:52 |
| 20:14 | 20:36 | 20:58 | 21:20 | 21:42 | 22:10 |
| 22:26 | 22:48 | 23:10 | 23:32 | 23:54 | |

Horários Domingo (3 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:00 | 05:42 | 06:24 | 07:06 | 07:48 | 08:30 |
| 09:12 | 09:54 | 10:22 | 10:50 | 11:18 | 11:46 |
| 12:14 | 12:42 | 13:10 | 13:38 | 14:06 | 14:34 |
| 15:02 | 15:30 | 15:58 | 16:26 | 16:54 | 17:22 |
| 17:50 | 18:18 | 19:00 | 19:42 | 20:24 | 21:06 |
| 21:48 | | | | | |

Horários Domingo

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:42 | 06:24 | 07:06 | 07:48 | 08:30 | 09:12 |
| 09:54 | 10:36 | 11:04 | 11:32 | 12:00 | 12:28 |
| 12:56 | 13:24 | 13:52 | 14:20 | 14:48 | 15:16 |
| 15:44 | 16:12 | 16:40 | 17:08 | 17:36 | 18:04 |
| 18:32 | 19:00 | 19:42 | 20:24 | 21:06 | 21:48 |
| 22:30 | | | | | |

Itinerário (37 paradas)

TERM OURO VERDE - R ARMANDO FREDERICO RENGANESCHI - AV RUY RODRIGUEZ - AC ACESSO - AV RUY RODRIGUEZ - AC ACESSO - AV RUY RODRIGUEZ - AC ACESSO - AV RUY RODRIGUEZ - AC ACESSO - AV PRES JUSCELINO - AV SEN ANTONIO LACERDA FRANCO - AV MIRANDOPOLIS - AV DANTE ALIGHIERI - AV DAS AMOREIRAS - AC ACESSO - AV PREF FARIA LIMA - AV MONS JOAO BATISTA MARTINS LADEIRA - VIA EXPR WALDEMAR PASCHOAL - AC ACESSO - AV AQUIDABA - AC ACESSO - VIA EXPR WALDEMAR PASCHOAL - R GAL MARCONDES SALGADO - AV DR MORAES SALLES - AV PRSA D'OESTE - RETORNO - AV PRSA D'OESTE - AV DR MORAES SALLES - ROD DR HEITOR PENTEADO (SP-81) - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - AV ROTARY - AV IGUAATEMI - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUAATEMI

Itinerário (36 paradas)

TERM SHOPPING IGUAATEMI - AV SEN DARCY RIBEIRO - AV IGUAATEMI - AC ACESSO - AV IGUAATEMI - AV ROTARY - AV JOSE BONIFACIO - R HERMINIO HUMBERTO BERTANI - AC ACESSO - AV DR MORAES SALLES - R CEL QUIRINO - VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - AC ACESSO - VIA EXPR WALDEMAR PASCHOAL - AV MONS JOAO BATISTA MARTINS LADEIRA - AV PREF FARIA LIMA - AV DAS AMOREIRAS - AV MIRANDOPOLIS - AV PRES JUSCELINO - PCA BRYGHAM YOUNG - AV PRES JUSCELINO - AV RUY RODRIGUEZ - R ALBERTINO RODRIGUES - AV CARLOS LACERDA - AV RUY RODRIGUEZ - AC ACESSO - AV RUY RODRIGUEZ - R ARMANDO FREDERICO RENGANESCHI - TERM OURO VERDE -

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Disque CIMCamp: (19)3772-1517

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Atualizado em 26/9/2015

Gerado por AutoBus/Geologica

Linha 307 - INTERBAIRROS I

É obrigatório o fechamento de todas as viagens desta linha no Pt2; os horários do Pt2 são de referên

Empresa: BONAVITA III

Ida: INTERBAIRROS I

Volta: INTERBAIRROS I

Saindo de -
52,16 Km em 60 minutos**Horários Útil (2 veículos)**

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:40 | 06:40 | 07:40 | 08:40 | 10:40 | 11:40 |
| 12:40 | 13:40 | 14:40 | 15:40 | 16:40 | 17:40 |
| 18:40 | 19:40 | 21:40 | 22:40 | 23:40 | |

Horários Sábado (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:40 | 06:40 | 07:40 | 08:40 | 10:40 | 11:40 |
| 12:40 | 13:40 | 14:40 | 15:40 | 16:40 | 17:40 |
| 18:40 | 19:40 | 21:40 | 22:40 | 23:40 | |

Itinerário (145 paradas)

TERM SHOPPING IGUATEMI - AV SEN DARCY RIBEIRO - AV IGUATEMI - AV MACKENZIE - AV DR NELSON NORONHA GUSTAVO FILHO - R JOAO QUIRINO DO NASCIMENTO - R CLAUDINEI MATTANO - AV DR BERNARDO KAPLAN - R JADER PASSOS - R DR FREDERICO MARCONDES MACHADO - R ANTONIO MAURICIO LADEIRA - AV CARLOS GRIMALDI - R ANALANDIA - R LEONARDO DA VINCI - R ARLINDO CARPINO - R DONA LUISA DE GUSMAO - R NUNO ALVARES PEREIRA - AV DIOGO ALVARES - AV LAFAYETE ARRUDA CAMARGO - R LIDIA ARRUDA CAMARGO - R LUPERCIO ARRUDA CAMARGO - AV ESTHER MORETZSHON CAMARGO - AC BALAO - R LUIZ MORETZSHON CAMARGO - ROD ENG MIGUEL NOEL NASCENTES BURNIER - RETORNO - AC ACESSO - R LUIZ OTAVIO - R JASMIM - R IZABEL NEGRAO BERTOTTI - R HERMANTINO COELHO - R ADELINO MARTINS - R ALVARO BOSCO - R AGLAIR BURATTO VILLAS BOAS - AV GUILHERME CAMPOS - AV WAGNER SAMARA - TERM SHOPPING DOM PEDRO - AC RETORNO AV WAGNER SAMARA - AV WAGNER SAMARA - R ZERILLO PEREIRA LOPES - R EUNICE VIRGINIA RAMOS NAVERO - R JOSE LINS DO REGO - AV ALMEIDA GARRET - PCA LUDWIG WINKLER - AV ALMEIDA GARRET - AV THEODURETO DE ALMEIDA CAMARGO - AV BRASIL - AV LUIZ SMANIO - PCA TIRO DE GUERRA - AV ANDRADE NEVES - R STO ANTONIO CLARET - AV MAL RONDON - R FRANCISCO GASPAS DA SILVA - R FLAVIO DE CARVALHO - R RAUL PILLA - AV PAPA JOAO XXIII - AC ACESSO - R MARIO JUNQUEIRA DA SILVA - AC ACESSO - R MARTIN LUTHER KING JR - R DR ROCHA NOVAES - AC ACESSO - R HERMANO RIBEIRO DA SILVA - R DR OSWALDO DA SILVEIRA NEVES - R DR CORIOLANO ROBERTO ALVES - R PROF NORBERTO DE SOUZA PINTO - AC ACESSO - R ALTEMIRO DE SOUZA LEITE - R HERMANO RIBEIRO DA SILVA - AV MAL RONDON - AC ACESSO - AV MAL RONDON - AC ACESSO - PCA JOAO DOS SANTOS TEIXEIRA - AV LICIA FREDERICO PETTINE - R COMEND BERNARDO ALVES TEIXEIRA - AV PE GASPAR BERTONI - R DANTE SURIANI - R COMEND DE JERONIMO DE CAMPOS FREIRE - R OSVALDO SERRA - AV ALZIRO ZARUR - AV PE GASPAR BERTONI - R ANTONIO RODRIGUES DE CARVALHO - AV JOSE PANCETTI - PCA DR JOSE SALOMAO HOSSRI - R DONA LICINIA TEIXEIRA DE SOUZA - AV JOSE PANCETTI - MARCELO RODRIGUES TEDESCHI - AV JOSE PANCETTI - AV JOSE MARIO DE ARRUDA TOLEDO "J, TOLEDO" (J TOLEDO) - AC ACESSO - AV JOHN BOYD DUNLOP - AC ACESSO - AV JOHN BOYD DUNLOP - PCA STA CATARINA - R JOSE MARIA LISBOA - R CAD JOAO TEIXEIRA - AV BR DE MONTE ALEGRE - R DR SALLES OLIVEIRA - AV JOAO JORGE - VD MIGUEL VICENTE CURY - AV DR MORAES SALLES - AV FRANCISCO GLICERIO - R DA ABOLICAO - R ALVARO RIBEIRO - AV DA SAUDADE - R LUIZ CAPP - PCA VOLUNTARIOS DE TRINTA E DOIS - R DA ABOLICAO - AC ACESSO - AV ENG AUGUSTO FIGUEIREDO - AC ACESSO - R MARTINHO CALSAVARA - AC ACESSO - AV COMEND ENZO FERRARI - AV DR ARLINDO JOAQUIM DE LEMOS - AV COMEND ENZO FERRARI - AV DR ARLINDO JOAQUIM DE LEMOS - R CDE D'EU - AV IMPZ DONA TEREZA CRISTINA - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - R FILISMINA STEMME CAJADO - R SERRA D'AGUA - R SERRA DE MACAE - R SERRA DAS LAVRAS - R SERRA DO UMBUZEIRO - R SERRA DOS CRISTAIS - R SERRA FORMOSA - AV DR MANOEL AFONSO FERREIRA - AV DR MORAES SALLES - ROD DR HEITOR PENTEADO (SP-81) - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - AV ROTARY - AV IGUATEMI - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUATEMI

Horários Útil (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:50 | 07:50 | 08:50 | 09:50 | 11:50 | 12:50 |
| 13:50 | 14:50 | 15:50 | 16:50 | 17:50 | 18:50 |
| 19:50 | 20:50 | 22:50 | 23:50 | | |

Horários Sábado (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:50 | 07:50 | 08:50 | 09:50 | 11:50 | 12:50 |
| 13:50 | 14:50 | 15:50 | 16:50 | 17:50 | 18:50 |
| 19:50 | 20:50 | 22:50 | 23:50 | | |

Itinerário (145 paradas)

TERM SHOPPING IGUATEMI - AV SEN DARCY RIBEIRO - AV IGUATEMI - AV MACKENZIE - AV DR NELSON NORONHA GUSTAVO FILHO - R JOAO QUIRINO DO NASCIMENTO - R CLAUDINEI MATTANO - AV DR BERNARDO KAPLAN - R JADER PASSOS - R DR FREDERICO MARCONDES MACHADO - R ANTONIO MAURICIO LADEIRA - AV CARLOS GRIMALDI - R ANALANDIA - R LEONARDO DA VINCI - R ARLINDO CARPINO - R DONA LUISA DE GUSMAO - R NUNO ALVARES PEREIRA - AV DIOGO ALVARES - AV LAFAYETE ARRUDA CAMARGO - R LIDIA ARRUDA CAMARGO - R LUPERCIO ARRUDA CAMARGO - AV ESTHER MORETZSHON CAMARGO - AC BALAO - R LUIZ MORETZSHON CAMARGO - ROD ENG MIGUEL NOEL NASCENTES BURNIER - RETORNO - AC ACESSO - R LUIZ OTAVIO - R JASMIM - R IZABEL NEGRAO BERTOTTI - R HERMANTINO COELHO - R ADELINO MARTINS - R ALVARO BOSCO - R AGLAIR BURATTO VILLAS BOAS - AV GUILHERME CAMPOS - AV WAGNER SAMARA - TERM SHOPPING DOM PEDRO - AC RETORNO AV WAGNER SAMARA - AV WAGNER SAMARA - R ZERILLO PEREIRA LOPES - R EUNICE VIRGINIA RAMOS NAVERO - R JOSE LINS DO REGO - AV ALMEIDA GARRET - PCA LUDWIG WINKLER - AV ALMEIDA GARRET - AV THEODURETO DE ALMEIDA CAMARGO - AV BRASIL - AV LUIZ SMANIO - PCA TIRO DE GUERRA - AV ANDRADE NEVES - R STO ANTONIO CLARET - AV MAL RONDON - R FRANCISCO GASPAS DA SILVA - R FLAVIO DE CARVALHO - R RAUL PILLA - AV PAPA JOAO XXIII - AC ACESSO - R MARIO JUNQUEIRA DA SILVA - AC ACESSO - R MARTIN LUTHER KING JR - R DR ROCHA NOVAES - AC ACESSO - R HERMANO RIBEIRO DA SILVA - R DR OSWALDO DA SILVEIRA NEVES - R DR CORIOLANO ROBERTO ALVES - R PROF NORBERTO DE SOUZA PINTO - AC ACESSO - R ALTEMIRO DE SOUZA LEITE - R HERMANO RIBEIRO DA SILVA - AV MAL RONDON - AC ACESSO - AV MAL RONDON - AC ACESSO - PCA JOAO DOS SANTOS TEIXEIRA - AV LICIA FREDERICO PETTINE - R COMEND BERNARDO ALVES TEIXEIRA - AV PE GASPAR BERTONI - R DANTE SURIANI - R COMEND DE JERONIMO DE CAMPOS FREIRE - R OSVALDO SERRA - AV ALZIRO ZARUR - AV PE GASPAR BERTONI - R ANTONIO RODRIGUES DE CARVALHO - AV JOSE PANCETTI - PCA DR JOSE SALOMAO HOSSRI - R DONA LICINIA TEIXEIRA DE SOUZA - AV JOSE PANCETTI - MARCELO RODRIGUES TEDESCHI - AV JOSE PANCETTI - AV JOSE MARIO DE ARRUDA TOLEDO "J, TOLEDO" (J TOLEDO) - AC ACESSO - AV JOHN BOYD DUNLOP - AC ACESSO - AV JOHN BOYD DUNLOP - PCA STA CATARINA - R JOSE MARIA LISBOA - R CAD JOAO TEIXEIRA - AV BR DE MONTE ALEGRE - R DR SALLES OLIVEIRA - AV JOAO JORGE - VD MIGUEL VICENTE CURY - AV DR MORAES SALLES - AV FRANCISCO GLICERIO - R DA ABOLICAO - R ALVARO RIBEIRO - AV DA SAUDADE - R LUIZ CAPP - PCA VOLUNTARIOS DE TRINTA E DOIS - R DA ABOLICAO - AC ACESSO - AV ENG AUGUSTO FIGUEIREDO - AC ACESSO - R MARTINHO CALSAVARA - AC ACESSO - AV COMEND ENZO FERRARI - AV DR ARLINDO JOAQUIM DE LEMOS - AV COMEND ENZO FERRARI - AV DR ARLINDO JOAQUIM DE LEMOS - R CDE D'EU - AV IMPZ DONA TEREZA CRISTINA - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - R FILISMINA STEMME CAJADO - R SERRA D'AGUA - R SERRA DE MACAE - R SERRA DAS LAVRAS - R SERRA DO UMBUZEIRO - R SERRA DOS CRISTAIS - R SERRA FORMOSA - AV DR MANOEL AFONSO FERREIRA - AV DR MORAES SALLES - ROD DR HEITOR PENTEADO (SP-81) - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - AV ROTARY - AV IGUATEMI - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUATEMI

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Atualizado em 31/8/2015

Gerado por AutoBus/Geologica

Linha 308 - INTERBAIRROS II

Empresa: BONAVITA III

Ida: INTERBAIRROS II

Saindo de -
49,64 Km em 60 minutos

Horários Útil (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:40 | 06:40 | 07:40 | 08:40 | 10:40 | 11:40 |
| 12:40 | 13:40 | 14:40 | 15:40 | 16:40 | 17:40 |
| 18:40 | 19:40 | 21:40 | 22:40 | 23:40 | |

Horários Sábado (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:40 | 06:40 | 07:40 | 08:40 | 10:40 | 11:40 |
| 12:40 | 13:40 | 14:40 | 15:40 | 16:40 | 17:40 |
| 18:40 | 19:40 | 21:40 | 22:40 | 23:40 | |

Itinerário (146 paradas)

TERM SHOPPING IGUATEMI - AV SEN DARCY RIBEIRO - AV IGUATEMI - AC ACESSO - AV IGUATEMI - AV ROTARY - AV JOSE BONIFACIO - R HERMINIO HUMBERTO BERTANI - AC ACESSO - AV DR MORAES SALLES - R VSSA DE CAMPINAS - R ARTUR DE FREITAS LEITAO - AV DR JESUINO MARCONDES MACHADO - AV CLAUDIO CELESTINO DE TOLEDO SOARES - PCA SAGRADO CORACAO DE JESUS - AV DR MANOEL AFONSO FERREIRA - R SERRA FORMOSA - R SERRA DOS CRISTAIS - R SERRA DO UMBUZEIRO - R SERRA DAS LAVRAS - R SERRA DE MACAE - R SERRA D'AGUA - R FILISMINA STEMMER CAJADO - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - AV IMPZ DONA TEREZA CRISTINA - AV GUARANI - R DONA ALAYDE NASCIMENTO DE LEMOS - AV DR ARLINDO JOAQUIM DE LEMOS - AV COMEND ENZO FERRARI - AC ACESSO - AV ENG AUGUSTO FIGUEIREDO - R DA ABOLICAO - R ALVARO RIBEIRO - R DA ABOLICAO - AC ACESSO - AV FRANCISCO GLICERIO - PCA BRASIL OUTROS QUINHENTOS - R BR DE JAGUARA - PCA PONTE PRETA - PCA JOSE RODRIGUES - R PROENCA - R JOSE PAULINO - AV AQUIDABA - ACAV AQUIDABA - AC ACESSO - VIA EXPR WALDEMAR PASCHOAL - ANTONIO CARLOS DE TOLEDO NETO - R ALVARES MACHADO - AV PREF JOSE NICOLAU LUDGERO MASELLI (GEGERO) - AV SEN SARAIVA - R CON CIPIAO - AV PREF JOSE NICOLAU LUDGERO MASELLI (GEGERO) - AC VIADUTO MIGUEL VICENTE CURY - VD MIGUEL VICENTE CURY - AV JOAO JORGE - R FRANCISCO TEODORO - R RANGEL PESTANA - R DR SALLES OLIVEIRA - AC ACESSO - PCA JOAO MILANI - R DR PEREIRA LIMA - R CEL ANTONIO ALVARO - R MAXIMIANO DE CAMARGO - AV BUENO DE MIRANDA - R JOAQUIM ALVES DA COSTA - R JOAQUIM VILLAC - PCA STA CATARINA - AV JOHN BOYD DUNLOP - AC ACESSO - AV JOSE MARIO DE ARRUDA TOLEDO "J. TOLEDO" (J TOLEDO) - AV JOSE PANCETTI - MARCELO RODRIGUES TEDESCHI - AV JOSE PANCETTI - R OTAVIO NETO - R DONA LICINIA TEIXEIRA DE SOUZA - PCA DR JOSE SALOMAO HOSSRI - AV JOSE PANCETTI - PCA PASCOAL PADULA - R COMEND BERNARDO ALVES TEIXEIRA - PCA PASCOAL PADULA - AV PE GASPAR BERTONI - R DANTE SURIANI - R COMEND DE JERONIMO DE CAMPOS FREIRE - R OSWALDO SERRA - AV ALZIRO ZARUR - AV PE GASPAR BERTONI - PCA DA BIBLIA - PCA PASCOAL PADULA - AV LICIA FREDERICO PETTINE - PCA JOAO DOS SANTOS TEIXEIRA - AC ACESSO - AV MAL RONDON - R FRANCISCO GASPAR DA SILVA - R FLAVIO DE CARVALHO - R RAUL PILLA - AV PAPA JOAO XXIII - AC ACESSO - R MARIO JUNQUEIRA DA SILVA - AC ACESSO - R MARTIN LUTHER KING JR - R DR ROCHA NOVAES - AC ACESSO - R HERMANO RIBEIRO DA SILVA - R DR OSWALDO DA SILVEIRA NEVES - R DR CORIOLANO ROBERTO ALVES - R PROF NORBERTO DE SOUZA PINTO - AC ACESSO - R ALTEMIRO DE SOUZA LEITE - R HERMANO RIBEIRO DA SILVA - AV MAL RONDON - R FERNANDO DA CRUZ PASSOS - R REINALDO LAUBENSTEIN - AV MAL RONDON - R STO ANTONIO CLARET - R ORLANDO CARPINO - AV DR ALBERTO SARMENTO - PCA VINTE E TRES DE OUTUBRO - AV ANDRADE NEVES - PCA TIRO DE GUERRA - AV LUIZ SMANIO - AV BRASIL - AV THEODURETO DE ALMEIDA CAMARGO - PCA OCTAVIO DA SILVA LEME - AV ALMEIDA GARRET - ACAV ALMEIDA GARRET - AV ALMEIDA GARRET - PCA LUDWIG WINKLER - AV ALMEIDA GARRET - R MIOSOTIS - R DAS HORTENCIAS - R GIRASSOL - R RUTE FERRAZ DE ANGELIS - AV GUILHERME CAMPOS - AV WAGNER SAMARA - TERM SHOPPING DOM PEDRO - AC RETORNO AV WAGNER SAMARA - AV WAGNER SAMARA - R ZERILLO PEREIRA LOPES - RETORNO - R MARIA CHRISTI MATELLI - R AGLAIR BURATTO VILLAS BOAS - AC ACESSO - R ALVARO BOSCO - R JASMIM - ROD ENG MIGUEL NOEL NASCENTES BURNIER - ACROD MIGUEL N N BURNIER - ROD ENG MIGUEL NOEL NASCENTES BURNIER - AC ACESSO - R BENTO ARRUDA CAMARGO - AV LAFAYETE ARRUDA CAMARGO - AV DIOGO ALVARES - R NUNO ALVARES PEREIRA - R DONA LUISA DE GUSMAO - AV DR HEITOR PENTEADO - AC ACESSO - AV DR HEITOR PENTEADO - R DR ALFREDO MAIA BONATO - R DONA LUISA DE GUSMAO - R ARLINDO CARPINO - R LEONARDO DA VINCI - R MARIA AUGUSTA DE CARVALHO REIS - R CON PEDRO BONHOMME - R ANALANDIA - AV CARLOS GRIMALDI - R ANTONIO MAURICIO LADEIRA - R DR FREDERICO MARCONDES MACHADO - R FRANCISCO SIBILA - R JADER PASSOS - AV DR BERNARDO KAPLAN - R CLAUDINEI MATTANO - AC ACESSO - R ERNANI PEREIRA LOPES - AC ACESSO - AV DR NELSON NORONHA GUSTAVO FILHO - AV MACKENZIE - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUATEMI

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Site: www.emdec.com.br

Volta: INTERBAIRROS II

Horários Útil (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:30 | 07:30 | 08:30 | 09:30 | 11:30 | 12:30 |
| 13:30 | 14:30 | 15:30 | 16:30 | 17:30 | 18:30 |
| 19:30 | 20:30 | 22:30 | 23:30 | | |

Horários Sábado (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:30 | 07:30 | 08:30 | 09:30 | 11:30 | 12:30 |
| 13:30 | 14:30 | 15:30 | 16:30 | 17:30 | 18:30 |
| 19:30 | 20:30 | 22:30 | 23:30 | | |

Itinerário (146 paradas)

TERM SHOPPING IGUATEMI - AV SEN DARCY RIBEIRO - AV IGUATEMI - AC ACESSO - AV IGUATEMI - AV ROTARY - AV JOSE BONIFACIO - R HERMINIO HUMBERTO BERTANI - AC ACESSO - AV DR MORAES SALLES - R VSSA DE CAMPINAS - R ARTUR DE FREITAS LEITAO - AV DR JESUINO MARCONDES MACHADO - AV CLAUDIO CELESTINO DE TOLEDO SOARES - PCA SAGRADO CORACAO DE JESUS - AV DR MANOEL AFONSO FERREIRA - R SERRA FORMOSA - R SERRA DOS CRISTAIS - R SERRA DO UMBUZEIRO - R SERRA DAS LAVRAS - R SERRA DE MACAE - R SERRA D'AGUA - R FILISMINA STEMMER CAJADO - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - AV IMPZ DONA TEREZA CRISTINA - AV GUARANI - R DONA ALAYDE NASCIMENTO DE LEMOS - AV DR ARLINDO JOAQUIM DE LEMOS - AV COMEND ENZO FERRARI - AC ACESSO - AV ENG AUGUSTO FIGUEIREDO - R DA ABOLICAO - R ALVARO RIBEIRO - R DA ABOLICAO - AC ACESSO - AV FRANCISCO GLICERIO - PCA BRASIL OUTROS QUINHENTOS - R BR DE JAGUARA - PCA PONTE PRETA - PCA JOSE RODRIGUES - R PROENCA - R JOSE PAULINO - AV AQUIDABA - ACAV AQUIDABA - AC ACESSO - VIA EXPR WALDEMAR PASCHOAL - ANTONIO CARLOS DE TOLEDO NETO - R ALVARES MACHADO - AV PREF JOSE NICOLAU LUDGERO MASELLI (GEGERO) - AV SEN SARAIVA - R CON CIPIAO - AV PREF JOSE NICOLAU LUDGERO MASELLI (GEGERO) - AC VIADUTO MIGUEL VICENTE CURY - VD MIGUEL VICENTE CURY - AV JOAO JORGE - R FRANCISCO TEODORO - R RANGEL PESTANA - R DR SALLES OLIVEIRA - AC ACESSO - PCA JOAO MILANI - R DR PEREIRA LIMA - R CEL ANTONIO ALVARO - R MAXIMIANO DE CAMARGO - AV BUENO DE MIRANDA - R JOAQUIM ALVES DA COSTA - R JOAQUIM VILLAC - PCA STA CATARINA - AV JOHN BOYD DUNLOP - AC ACESSO - AV JOSE MARIO DE ARRUDA TOLEDO "J. TOLEDO" (J TOLEDO) - AV JOSE PANCETTI - MARCELO RODRIGUES TEDESCHI - AV JOSE PANCETTI - R OTAVIO NETO - R DONA LICINIA TEIXEIRA DE SOUZA - PCA DR JOSE SALOMAO HOSSRI - AV JOSE PANCETTI - PCA PASCOAL PADULA - R COMEND BERNARDO ALVES TEIXEIRA - PCA PASCOAL PADULA - AV PE GASPAR BERTONI - R DANTE SURIANI - R COMEND DE JERONIMO DE CAMPOS FREIRE - R OSWALDO SERRA - AV ALZIRO ZARUR - AV PE GASPAR BERTONI - PCA DA BIBLIA - PCA PASCOAL PADULA - AV LICIA FREDERICO PETTINE - PCA JOAO DOS SANTOS TEIXEIRA - AC ACESSO - AV MAL RONDON - R FRANCISCO GASPAR DA SILVA - R FLAVIO DE CARVALHO - R RAUL PILLA - AV PAPA JOAO XXIII - AC ACESSO - R MARIO JUNQUEIRA DA SILVA - AC ACESSO - R MARTIN LUTHER KING JR - R DR ROCHA NOVAES - AC ACESSO - R HERMANO RIBEIRO DA SILVA - R DR OSWALDO DA SILVEIRA NEVES - R DR CORIOLANO ROBERTO ALVES - R PROF NORBERTO DE SOUZA PINTO - AC ACESSO - R ALTEMIRO DE SOUZA LEITE - R HERMANO RIBEIRO DA SILVA - AV MAL RONDON - R FERNANDO DA CRUZ PASSOS - R REINALDO LAUBENSTEIN - AV MAL RONDON - R STO ANTONIO CLARET - R ORLANDO CARPINO - AV DR ALBERTO SARMENTO - PCA VINTE E TRES DE OUTUBRO - AV ANDRADE NEVES - PCA TIRO DE GUERRA - AV LUIZ SMANIO - AV BRASIL - AV THEODURETO DE ALMEIDA CAMARGO - PCA OCTAVIO DA SILVA LEME - AV ALMEIDA GARRET - ACAV ALMEIDA GARRET - AV ALMEIDA GARRET - PCA LUDWIG WINKLER - AV ALMEIDA GARRET - R MIOSOTIS - R DAS HORTENCIAS - R GIRASSOL - R RUTE FERRAZ DE ANGELIS - AV GUILHERME CAMPOS - AV WAGNER SAMARA - TERM SHOPPING DOM PEDRO - AC RETORNO AV WAGNER SAMARA - AV WAGNER SAMARA - R ZERILLO PEREIRA LOPES - RETORNO - R MARIA CHRISTI MATELLI - R AGLAIR BURATTO VILLAS BOAS - AC ACESSO - R ALVARO BOSCO - R JASMIM - ROD ENG MIGUEL NOEL NASCENTES BURNIER - ACROD MIGUEL N N BURNIER - ROD ENG MIGUEL NOEL NASCENTES BURNIER - AC ACESSO - R BENTO ARRUDA CAMARGO - AV LAFAYETE ARRUDA CAMARGO - AV DIOGO ALVARES - R NUNO ALVARES PEREIRA - R DONA LUISA DE GUSMAO - AV DR HEITOR PENTEADO - AC ACESSO - AV DR HEITOR PENTEADO - R DR ALFREDO MAIA BONATO - R DONA LUISA DE GUSMAO - R ARLINDO CARPINO - R LEONARDO DA VINCI - R MARIA AUGUSTA DE CARVALHO REIS - R CON PEDRO BONHOMME - R ANALANDIA - AV CARLOS GRIMALDI - R ANTONIO MAURICIO LADEIRA - R DR FREDERICO MARCONDES MACHADO - R FRANCISCO SIBILA - R JADER PASSOS - AV DR BERNARDO KAPLAN - R CLAUDINEI MATTANO - AC ACESSO - R ERNANI PEREIRA LOPES - AC ACESSO - AV DR NELSON NORONHA GUSTAVO FILHO - AV MACKENZIE - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUATEMI

Atualizado em 31/8/2015
Gerado por AutoBus/Geologística



Linhas 364 - JARDIM SÃO FERNANDO (INCLUSIVO)

Esta linha é operada pelas permissões vinculadas à Altercamp. Os operadores devem mudar a indicação

Empresa: ALTERCAMP

Ida: CIRCULAR CENTRO

Volta: JD. SAO FERNANDO

Saindo de -

15,11 Km entre 30 a 36 minutos

Horários Útil (8 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:00 | 05:16 | 05:32 | 05:48 | 05:56 | 06:05 |
| 06:14 | 06:23 | 06:32 | 06:41 | 06:50 | 06:59 |
| 07:08 | 07:17 | 07:26 | 07:35 | 07:44 | 07:53 |
| 08:02 | 08:11 | 08:20 | 08:29 | 08:38 | 08:47 |
| 09:00 | 09:10 | 09:20 | 09:30 | 09:40 | 09:50 |
| 10:00 | 10:10 | 10:20 | 10:30 | 10:40 | 10:50 |
| 11:00 | 11:10 | 11:20 | 11:30 | 11:40 | 11:50 |
| 12:00 | 12:10 | 12:20 | 12:30 | 12:40 | 12:50 |
| 13:00 | 13:10 | 13:20 | 13:30 | 13:40 | 13:50 |
| 14:00 | 14:10 | 14:20 | 14:30 | 14:40 | 14:50 |
| 15:00 | 15:10 | 15:20 | 15:30 | 15:40 | 15:49 |
| 15:58 | 16:07 | 16:16 | 16:25 | 16:34 | 16:43 |
| 16:52 | 17:01 | 17:10 | 17:19 | 17:28 | 17:37 |
| 17:46 | 17:55 | 18:04 | 18:13 | 18:22 | 18:31 |
| 18:40 | 18:49 | 18:58 | 19:07 | 19:30 | 19:53 |
| 20:16 | 20:39 | 21:02 | 21:25 | 21:48 | 22:11 |
| 22:34 | 22:57 | 23:20 | 23:43 | | |

Horários Útil (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:32 | 05:48 | 06:04 | 06:20 | 06:32 | 06:41 |
| 06:50 | 06:59 | 07:08 | 07:17 | 07:26 | 07:35 |
| 07:44 | 07:53 | 08:02 | 08:11 | 08:20 | 08:29 |
| 08:38 | 08:47 | 08:56 | 09:05 | 09:14 | 09:23 |
| 09:35 | 09:45 | 09:55 | 10:05 | 10:15 | 10:25 |
| 10:35 | 10:45 | 10:55 | 11:05 | 11:15 | 11:25 |
| 11:35 | 11:45 | 11:55 | 12:05 | 12:15 | 12:25 |
| 12:35 | 12:45 | 12:55 | 13:05 | 13:15 | 13:25 |
| 13:35 | 13:45 | 13:55 | 14:05 | 14:15 | 14:25 |
| 14:35 | 14:45 | 14:55 | 15:05 | 15:15 | 15:25 |
| 15:35 | 15:45 | 15:55 | 16:05 | 16:15 | 16:25 |
| 16:34 | 16:43 | 16:52 | 17:01 | 17:10 | 17:19 |
| 17:28 | 17:37 | 17:46 | 17:55 | 18:04 | 18:13 |
| 18:22 | 18:31 | 18:40 | 18:49 | 18:58 | 19:07 |
| 19:16 | 19:25 | 19:34 | 19:43 | 20:04 | 20:27 |
| 20:50 | 21:13 | 21:36 | 21:59 | 22:22 | 22:45 |
| 23:08 | 23:31 | 23:54 | 00:17 | | |

Horários Sábado (5 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:00 | 05:14 | 05:28 | 05:42 | 05:56 | 06:10 |
| 06:24 | 06:38 | 06:52 | 07:06 | 07:20 | 07:34 |
| 07:48 | 08:02 | 08:16 | 08:30 | 08:44 | 08:58 |
| 09:30 | 09:44 | 09:58 | 10:12 | 10:26 | 10:40 |
| 10:54 | 11:08 | 11:22 | 11:36 | 11:50 | 12:04 |
| 12:18 | 12:32 | 12:46 | 13:00 | 13:14 | 13:28 |
| 13:51 | 14:14 | 14:37 | 15:00 | 15:23 | 15:46 |
| 16:09 | 16:32 | 16:55 | 17:18 | 17:41 | 18:04 |
| 18:27 | 18:50 | 19:30 | 19:53 | 20:16 | 20:39 |
| 21:02 | 21:25 | 21:48 | 22:11 | 22:34 | 22:57 |
| 23:20 | 23:43 | | | | |

Horários Sábado (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:35 | 05:49 | 06:03 | 06:17 | 06:31 | 06:45 |
| 06:59 | 07:13 | 07:27 | 07:41 | 07:55 | 08:09 |
| 08:23 | 08:37 | 08:51 | 09:05 | 09:19 | 09:33 |
| 10:05 | 10:19 | 10:33 | 10:47 | 11:01 | 11:15 |
| 11:29 | 11:43 | 11:57 | 12:11 | 12:25 | 12:39 |
| 12:53 | 13:07 | 13:21 | 13:35 | 13:49 | 14:03 |
| 14:25 | 14:48 | 15:11 | 15:34 | 15:57 | 16:20 |
| 16:43 | 17:06 | 17:29 | 17:52 | 18:15 | 18:38 |
| 19:01 | 19:24 | 20:04 | 20:27 | 20:50 | 21:13 |
| 21:36 | 21:59 | 22:22 | 22:45 | 23:08 | 23:31 |
| 23:54 | 00:17 | | | | |

Horários Domingo (3 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:00 | 05:23 | 05:46 | 06:09 | 06:32 | 06:55 |
| 07:18 | 07:41 | 08:04 | 08:27 | 08:50 | 09:13 |
| 09:56 | 10:19 | 10:42 | 11:05 | 11:28 | 11:51 |
| 12:14 | 12:37 | 13:00 | 13:23 | 13:46 | 14:09 |
| 14:32 | 14:55 | 15:18 | 15:41 | 16:04 | 16:27 |
| 16:50 | 17:13 | 17:36 | 17:59 | 18:22 | 18:45 |
| 19:30 | 19:53 | 20:16 | 20:39 | 21:02 | 21:25 |
| 21:48 | 22:11 | 22:34 | 22:57 | 23:20 | 23:43 |

Horários Domingo (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:34 | 05:57 | 06:20 | 06:43 | 07:06 | 07:29 |
| 07:52 | 08:15 | 08:38 | 09:01 | 09:24 | 09:47 |
| 10:30 | 10:53 | 11:16 | 11:39 | 12:02 | 12:25 |
| 12:48 | 13:11 | 13:34 | 13:57 | 14:20 | 14:43 |
| 15:06 | 15:29 | 15:52 | 16:15 | 16:38 | 17:01 |
| 17:24 | 17:47 | 18:10 | 18:33 | 18:56 | 19:19 |
| 20:04 | 20:27 | 20:50 | 21:13 | 21:36 | 21:59 |
| 22:22 | 22:45 | 23:08 | 23:31 | 23:54 | 00:17 |

Itinerário (54 paradas)

AV DR MANOEL AFONSO FERREIRA - R SERRA FORMOSA - R SERRA DOS CRISTAIS - R SERRA DO UMBUZEIRO - R SERRA DAS LAVRAS - R SERRA DE MACAE - R SERRA D'AGUA - R FILISMINA STEMMER CAJADO - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - AV IMPZ DONA TEREZA CRISTINA - R CDE D'EU - R BR DE PARANAPANEMA - R URUGUAIANA - R BOAVENTURA DO AMARAL - R CONCEICAO - R S PEDRO - R GAL OSORIO - R ANTONIO CESARINO - AV BENJAMIN CONSTANT - R JOSE PAULINO - R JULIO FRANK DE ARRUDA - R DR ANTONIO A LOBO - R DR DELPHINO CINTRA - AC BR DE ITAPURA - AV BR DE ITAPURA - R JOSE PAULINO - AV FRANCISCO GLICERIO - R CONCEICAO - AV DE JULIO MESQUITA - R ITU - AV DR MORAES SALLES - R CEL QUIRINO - VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - R IRMA SERAFINA - R URUGUAIANA - R DR QUIRINO - R PROENCA - AV PRSA D'OESTE - AC ACESSO - R CDE D'EU - AV IMPZ DONA TEREZA CRISTINA - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - R FILISMINA STEMMER CAJADO - R SERRA D'AGUA - R SERRA DE MACAE - R SERRA DAS LAVRAS - R SERRA DO UMBUZEIRO - R SERRA DOS CRISTAIS - R SERRA FORMOSA - AV DR MANOEL AFONSO FERREIRA

Itinerário (54 paradas)

AV DR MANOEL AFONSO FERREIRA - R SERRA FORMOSA - R SERRA DOS CRISTAIS - R SERRA DO UMBUZEIRO - R SERRA DAS LAVRAS - R SERRA DE MACAE - R SERRA D'AGUA - R FILISMINA STEMMER CAJADO - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - AV IMPZ DONA TEREZA CRISTINA - R CDE D'EU - R BR DE PARANAPANEMA - R URUGUAIANA - R BOAVENTURA DO AMARAL - R CONCEICAO - R S PEDRO - R GAL OSORIO - R ANTONIO CESARINO - AV BENJAMIN CONSTANT - R JOSE PAULINO - R JULIO FRANK DE ARRUDA - R DR ANTONIO A LOBO - R DR DELPHINO CINTRA - AC BR DE ITAPURA - AV BR DE ITAPURA - R JOSE PAULINO - AV FRANCISCO GLICERIO - R CONCEICAO - AV DE JULIO MESQUITA - R ITU - AV DR MORAES SALLES - R CEL QUIRINO - VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - R IRMA SERAFINA - R URUGUAIANA - R DR QUIRINO - R PROENCA - AV PRSA D'OESTE - AC ACESSO - R CDE D'EU - AV IMPZ DONA TEREZA CRISTINA - AV IMPZ DONA AMELIA - R BOAVENTURA LEMOS - AV IMPZ DONA AMELIA - R FILISMINA STEMMER CAJADO - R SERRA D'AGUA - R SERRA DE MACAE - R SERRA DAS LAVRAS - R SERRA DO UMBUZEIRO - R SERRA DOS CRISTAIS - R SERRA FORMOSA - AV DR MANOEL AFONSO FERREIRA

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Disque CIMCamp: (19)3772-1517

Site: www.emdec.com.br

Atualizado em 1/4/2015

Gerado por AutoBus/Geologica



Linhas 368 - JARDIM ITATIAIA

É obrigatório o fechamento de todas as viagens no Pt2 onde os horários são de referencia para contro

Empresa: ALTERCAMP

Ida: RODOVIÁRIA

Saindo de R PLANALTO
12,29 Km entre 42 a 48 minutos

Horários Útil (6 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 04:50 | 05:06 | 05:22 | 05:38 | 05:54 | 06:10 |
| 06:26 | 06:42 | 06:58 | 07:14 | 07:30 | 07:46 |
| 08:02 | 08:20 | 08:38 | 08:56 | 09:14 | 09:32 |
| 09:50 | 10:08 | 10:26 | 10:44 | 11:02 | 11:20 |
| 11:38 | 11:56 | 12:14 | 12:32 | 12:50 | 13:08 |
| 13:26 | 13:44 | 14:02 | 14:20 | 14:38 | 14:56 |
| 15:14 | 15:32 | 15:50 | 16:08 | 16:26 | 16:44 |
| 17:01 | 17:17 | 17:33 | 17:49 | 18:05 | 18:21 |
| 18:37 | 18:53 | 19:11 | 19:27 | 19:43 | 20:00 |
| 21:13 | 21:31 | 21:49 | 22:07 | 22:25 | 22:43 |

Horários Sábado (4 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 04:50 | 05:10 | 05:30 | 05:50 | 06:10 | 06:30 |
| 06:50 | 07:10 | 07:30 | 07:50 | 08:10 | 08:30 |
| 08:50 | 09:10 | 09:30 | 09:50 | 10:20 | 10:40 |
| 11:00 | 11:20 | 11:40 | 12:00 | 12:20 | 12:40 |
| 13:00 | 13:20 | 13:40 | 14:00 | 14:20 | 14:40 |
| 15:00 | 15:20 | 15:40 | 16:00 | 16:20 | 16:40 |
| 17:00 | 17:20 | 17:40 | 18:00 | 18:35 | 19:10 |
| 19:45 | 20:20 | 20:55 | 21:30 | 22:05 | 22:40 |
| 23:15 | | | | | |

Horários Domingo (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 04:50 | 05:30 | 06:10 | 06:50 | 07:30 | 08:10 |
| 08:50 | 09:30 | 10:10 | 11:00 | 11:40 | 12:20 |
| 13:00 | 13:40 | 14:20 | 15:00 | 15:40 | 16:20 |
| 17:00 | 17:40 | 18:20 | 19:00 | 19:50 | 20:30 |
| 21:10 | 21:50 | 22:30 | 23:10 | | |

Itinerário (40 paradas)

R PLANALTO - R PENEDOS - AV ITATIAIA - R SERIDO - R RESTINGA - AV DAS ANDORINHAS - AV ITATIAIA - R SERTANEJO - R CAPIXABA - R ELIAS DE OLIVEIRA SABOIA - R SERRA DE MADUREIRA - R CARIOCA - R GAUCHO - R SERTANEJO - AV ITATIAIA - R FLUMINENSE - R NUNO COSTA ZINGRA - R BENJAMIN MALUF - R HERMANTINO PRADO - R FRANCISCO DUARTE REZENDE - R JOAQUIM MONTEIRO RAPHAEL - R DURVAL FARIA SOBR - R PRAIA DA ENSEADA - R PRAIA DE GUARAPARI - R PRAIA DO FLAMENGO - R PRAIA DO PEREQUE - R ARNALDO SIMOES PINTO - R JOSE DE OLIVEIRA MATIAS - R ELIAS DE OLIVEIRA SABOIA - R DONA HENEDINA DE OLIVEIRA BRESLER - R VISC DE GOMES PINTO - R NICOTA BAYEUX - AV DR ARLINDO JOAQUIM DE LEMOS - R JOAQUIM ROBERTO DE AZEVEDO MARQUES - AV PRSA D'OESTE - AV JOSE DE SOUZA CAMPOS - R ENG CARLOS STEVENSON - PCA MARIA LUIZA SILVEIRA PINTO DE MOURA - R DR EMILIO RIBAS - R CONCEICAO - R GAL OSORIO - R ANTONIO CESARINO - AV BENJAMIN CONSTANT - R ALVARES MACHADO - ACAV JOAO PENIDO BURNIER - AV JOAO PENIDO BURNIER - AV SEN SARAIVA - AV BENJAMIN CONSTANT - R DR RICARDO

style="border-color: #808080; border-top-style: solid; border-width: thin">

Disque CIMCamp: (19)3772-1517

Site: www.emdec.com.br

Volta: JARDIM ITATIAIA

Saindo de R DR RICARDO
12,52 Km entre 42 a 48 minutos

Horários Útil

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:38 | 05:54 | 06:10 | 06:26 | 06:42 | 06:58 |
| 07:14 | 07:30 | 07:46 | 08:02 | 08:18 | 08:34 |
| 08:50 | 09:05 | 09:23 | 09:41 | 09:59 | 10:17 |
| 10:35 | 10:53 | 11:11 | 11:29 | 11:47 | 12:05 |
| 12:23 | 12:41 | 12:59 | 13:17 | 13:35 | 13:53 |
| 14:11 | 14:29 | 14:47 | 15:05 | 15:23 | 15:41 |
| 15:59 | 16:13 | 16:29 | 16:45 | 17:01 | 17:17 |
| 17:33 | 17:49 | 18:05 | 18:21 | 18:37 | 18:53 |
| 19:09 | 19:25 | 19:41 | 20:03 | 20:31 | 20:59 |
| 21:27 | 21:55 | 22:23 | 22:51 | 23:19 | 23:47 |
| 00:15 | | | | | |

Horários Sábado

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:30 | 05:50 | 06:10 | 06:30 | 06:50 | 07:10 |
| 07:30 | 07:50 | 08:10 | 08:30 | 08:50 | 09:10 |
| 09:30 | 09:50 | 10:10 | 10:30 | 11:00 | 11:20 |
| 11:40 | 12:00 | 12:20 | 12:40 | 13:00 | 13:20 |
| 13:40 | 14:00 | 14:20 | 14:40 | 15:00 | 15:20 |
| 15:40 | 16:00 | 16:20 | 16:40 | 17:00 | 17:20 |
| 17:40 | 18:00 | 18:20 | 18:40 | 19:10 | 19:45 |
| 20:20 | 20:55 | 21:30 | 22:05 | 22:40 | 23:15 |
| 23:50 | | | | | |

Horários Domingo

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:30 | 06:10 | 06:50 | 07:30 | 08:10 | 08:50 |
| 09:30 | 10:10 | 10:50 | 11:40 | 12:20 | 13:00 |
| 13:40 | 14:20 | 15:00 | 15:40 | 16:20 | 17:00 |
| 17:40 | 18:20 | 19:00 | 19:40 | 20:30 | 21:10 |
| 21:50 | 22:30 | 23:10 | 23:50 | | |

Itinerário (42 paradas)

R DR RICARDO - R SEBASTIAO DE SOUZA - R ONZE DE AGOSTO - AV DR CAMPOS SALES - AV FRANCISCO GLICERIO - R CONCEICAO - R MARIA MONTEIRO - R JOSE PIRES NETO - PCA MARIA LUIZA SILVEIRA PINTO DE MOURA - R ENG CARLOS STEVENSON - AV JOSE DE SOUZA CAMPOS - AV PRSA D'OESTE - R JOAQUIM ROBERTO DE AZEVEDO MARQUES - AV DR ARLINDO JOAQUIM DE LEMOS - AV COMEND ENZO FERRARI - AC ACESSO - R VISC DE GOMES PINTO - R DONA HENEDINA DE OLIVEIRA BRESLER - R ELIAS DE OLIVEIRA SABOIA - R JOSE DE OLIVEIRA MATIAS - R ARNALDO SIMOES PINTO - R PRAIA DO PEREQUE - R PRAIA DO FLAMENGO - R PRAIA DE GUARAPARI - R PRAIA DA ENSEADA - AV MIN COSTA MANSO - R LUIZ CHIODETTO - AC ACESSO - R LUIZ CHIODETTO - R DURVAL FARIA SOBR - R JOAQUIM MONTEIRO RAPHAEL - R FRANCISCO DUARTE REZENDE - R HERMANTINO PRADO - R BENJAMIN MALUF - R NUNO COSTA ZINGRA - R FLUMINENSE - AV ITATIAIA - R SERTANEJO - R GAUCHO - R CARIOCA - R SERRA DE MADUREIRA - R ELIAS DE OLIVEIRA SABOIA - R CAPIXABA - R SERTANEJO - AV ITATIAIA - AV DAS ANDORINHAS - R RESTINGA - R SERIDO - AV ITATIAIA - R PENEDOS - R PLANALTO - R SALINAS - R IGAPOS - AC ACESSO - R PLANALTO -

Atualizado em 10/11/2014
Gerado por AutoBus/Geologista


Linha 378 - CARREFOUR VALINHOS/SHOPPING IGUATEMI

Esta linha esta autorizada a operar sem a obrigatoriedade da presença do cobrador.

Empresa: BONAVIDA III

Ida: SHOPPING IGUATEMI

Saindo de PCA SAUVAS
16,89 Km em 100 minutos

Horários Útil (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:05 | 06:55 | 07:45 | 08:35 | 09:25 | 10:30 |
| 11:20 | 12:10 | 13:00 | 13:50 | 14:40 | 15:30 |
| 16:20 | 17:10 | 18:00 | 18:50 | 19:55 | 20:45 |
| 21:35 | 22:25 | | | | |

Horários Sábado (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:05 | 06:55 | 07:45 | 08:35 | 09:25 | 10:30 |
| 11:20 | 12:10 | 13:00 | 13:50 | 14:40 | 15:30 |
| 16:20 | 17:10 | 18:00 | 18:50 | 19:55 | 20:45 |
| 21:35 | 22:25 | | | | |

Horários Domingo (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 09:00 | 10:42 | 12:39 | 14:21 | 16:03 | 17:45 |
| 19:42 | 21:24 | | | | |

Itinerário (52 paradas)

PCA SAUVAS - SEM DENOMINAÇÃO - R MARIO DE SOUZA DAMY - R FRANCISCO JOAO CARLOS EBERL - R ANTONIO CAMPAGNONE - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - AC ACESSO - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - AC ACESSO - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - R JOAQUIM RAPHAEL DA ROCHA SOBR - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - PCA DA FRATERNIDADE - AV JORGE TIBIRICA - AV WASHINGTON LUIZ - ESTACAO PQ PRADO - AV WASHINGTON LUIZ - R DONA EGLANTINA PENTEADO DA SILVA PRADO - AV MARIA EMILIA ALVES DOS SANTOS DE ANGELIS - SEM DENOMINAÇÃO - AV BRUNORO DE GASPERI - AV S JOSE DOS CAMPOS - AV BADEN POWELL - PCA MARIA SOARES LEMOS - AV ESTADOS UNIDOS - R TAQUARITINGA - AV RALPHO LEITE DE BARROS - R NICARAGUA - AV DR ANGELO SIMOES - R DR CELSO DA SILVEIRA REZENDE - AV DR ANGELO SIMOES - PCA HELIO JOAO ZIGGIATTI - AV DR ANGELO SIMOES - AV MONTE CASTELO - AV AYRTON SENNA DA SILVA - AC ACESSO - AV PRSA D'OESTE - AV DR MORAES SALLES - ROD DR HEITOR PENTEADO (SP-81) - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - AV ROTARY - AV IGUATEMI - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUATEMI

Volta: CARREFOUR VALINHOS

Saindo de TERM SHOPPING IGUATEMI
16,87 Km em 100 minutos

Horários Útil

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:05 | 06:55 | 07:45 | 08:35 | 09:25 | 10:15 |
| 11:20 | 12:10 | 13:00 | 13:50 | 14:40 | 15:30 |
| 16:20 | 17:10 | 18:00 | 18:50 | 19:40 | 20:45 |
| 21:35 | 22:25 | 23:15 | | | |

Horários Sábado

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:05 | 06:55 | 07:45 | 08:35 | 09:25 | 10:15 |
| 11:20 | 12:10 | 13:00 | 13:50 | 14:40 | 15:30 |
| 16:20 | 17:10 | 18:00 | 18:50 | 19:40 | 20:45 |
| 21:35 | 22:25 | 23:15 | | | |

Horários Domingo

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 09:51 | 11:33 | 13:30 | 15:12 | 16:54 | 18:36 |
| 20:33 | 22:15 | | | | |

Itinerário (47 paradas)

TERM SHOPPING IGUATEMI - AV SEN DARCY RIBEIRO - AV IGUATEMI - AC ACESSO - AV IGUATEMI - AV ROTARY - AV JOSE BONIFACIO - R HERMINIO HUMBERTO BERTANI - AC ACESSO - AV DR MORAES SALLES - AC ACESSO - AV PRSA D'OESTE - AV AYRTON SENNA DA SILVA - AV MONTE CASTELO - AV DR ANGELO SIMOES - PCA HELIO JOAO ZIGGIATTI - AV DR ANGELO SIMOES - R NICARAGUA - R PARAGUAI - AV ESTADOS UNIDOS - PCA MARIA SOARES LEMOS - AV BADEN POWELL - AV S JOSE DOS CAMPOS - AV BRUNORO DE GASPERI - AV MARIA EMILIA ALVES DOS SANTOS DE ANGELIS - R DONA EGLANTINA PENTEADO DA SILVA PRADO - AC ACESSO - R LUX AETERNA - ESTACAO PQ PRADO - R LUX AETERNA - R PAULINIA - AV JORGE TIBIRICA - PCA DA FRATERNIDADE - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - AC ACESSO - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - AC ACESSO - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - AC ACESSO - AV ENG ANTONIO FRANCISCO DE PAULA SOUZA - R ANTONIO CAMPAGNONE - R FRANCISCO JOAO CARLOS EBERL - R MARIO DE SOUZA DAMY - SEM DENOMINAÇÃO - R ANTONIO MARQUES SERRA - R VERGILIO BRITO SIMOES - PCA SAUVAS -

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Disque CIMCamp: (19)3772-1517

Site: www.emdec.com.br

Atualizado em 9/2/2015

Gerado por AutoBus/Geologica



Linha 385 - SHOPPING IGUATEMI/ RODOVIARIA (INCLUSIVO)

Empresa: COTALCAMP

Ida: RODOVIARIA

Volta: SHOPPING IGUATEMI

Saindo de -
17,14 Km entre 1 a 36 minutos

Horários Útil (14 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:12 | 06:22 | 06:32 | 06:37 | 06:42 | 06:48 |
| 06:53 | 06:59 | 07:04 | 07:10 | 07:15 | 07:21 |
| 07:26 | 07:32 | 07:37 | 07:43 | 07:48 | 07:54 |
| 07:59 | 08:05 | 08:10 | 08:16 | 08:21 | 08:27 |
| 08:32 | 08:38 | 08:43 | 08:49 | 08:54 | 09:00 |
| 09:07 | 09:14 | 09:21 | 09:28 | 09:35 | 09:42 |
| 09:49 | 09:56 | 10:03 | 10:10 | 10:17 | 10:24 |
| 10:31 | 10:38 | 10:45 | 10:52 | 10:59 | 11:06 |
| 11:13 | 11:20 | 11:27 | 11:34 | 11:41 | 11:48 |
| 11:55 | 12:02 | 12:09 | 12:16 | 12:23 | 12:30 |
| 12:37 | 12:44 | 12:51 | 12:58 | 13:05 | 13:12 |
| 13:19 | 13:26 | 13:33 | 13:40 | 13:47 | 13:54 |
| 14:01 | 14:08 | 14:15 | 14:22 | 14:29 | 14:36 |
| 14:43 | 14:50 | 14:57 | 15:04 | 15:11 | 15:18 |
| 15:25 | 15:32 | 15:39 | 15:46 | 15:53 | 15:59 |
| 16:04 | 16:10 | 16:15 | 16:21 | 16:26 | 16:32 |
| 16:37 | 16:43 | 16:48 | 16:54 | 16:59 | 17:05 |
| 17:10 | 17:16 | 17:21 | 17:27 | 17:32 | 17:38 |
| 17:43 | 17:49 | 17:54 | 18:00 | 18:05 | 18:11 |
| 18:16 | 18:22 | 18:27 | 18:33 | 18:38 | 18:44 |
| 18:49 | 18:55 | 19:00 | 19:06 | 19:17 | 19:27 |
| 19:37 | 19:47 | 19:57 | 20:07 | 20:17 | 20:27 |
| 20:37 | 20:47 | 20:57 | 21:07 | 21:17 | 21:27 |
| 21:37 | 21:47 | 21:57 | 22:06 | 22:15 | 22:24 |
| 22:33 | 22:42 | 22:51 | 23:00 | 23:12 | 23:24 |

Horários Útil (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:30 | 05:40 | 05:50 | 06:00 | 06:05 | 06:11 |
| 06:16 | 06:22 | 06:27 | 06:33 | 06:38 | 06:44 |
| 06:49 | 06:55 | 07:00 | 07:06 | 07:11 | 07:17 |
| 07:22 | 07:28 | 07:33 | 07:39 | 07:44 | 07:50 |
| 07:55 | 08:01 | 08:06 | 08:12 | 08:17 | 08:23 |
| 08:28 | 08:34 | 08:39 | 08:45 | 08:50 | 08:56 |
| 09:01 | 09:07 | 09:12 | 09:18 | 09:23 | 09:29 |
| 09:34 | 09:40 | 09:47 | 09:54 | 10:01 | 10:08 |
| 10:15 | 10:22 | 10:29 | 10:36 | 10:43 | 10:50 |
| 10:57 | 11:04 | 11:11 | 11:18 | 11:25 | 11:32 |
| 11:39 | 11:46 | 11:53 | 12:00 | 12:07 | 12:14 |
| 12:21 | 12:28 | 12:35 | 12:42 | 12:49 | 12:56 |
| 13:03 | 13:10 | 13:17 | 13:24 | 13:31 | 13:38 |
| 13:45 | 13:52 | 13:59 | 14:06 | 14:13 | 14:20 |
| 14:27 | 14:34 | 14:41 | 14:48 | 14:55 | 15:02 |
| 15:09 | 15:16 | 15:23 | 15:30 | 15:37 | 15:44 |
| 15:51 | 15:58 | 16:05 | 16:12 | 16:19 | 16:26 |
| 16:33 | 16:39 | 16:44 | 16:50 | 16:55 | 17:01 |
| 17:06 | 17:12 | 17:17 | 17:23 | 17:28 | 17:34 |
| 17:39 | 17:45 | 17:50 | 17:56 | 18:01 | 18:07 |
| 18:12 | 18:18 | 18:23 | 18:29 | 18:34 | 18:40 |
| 18:45 | 18:51 | 18:57 | 19:07 | 19:17 | 19:27 |
| 19:37 | 19:47 | 19:57 | 20:07 | 20:17 | 20:27 |
| 20:37 | 20:47 | 20:57 | 21:07 | 21:17 | 21:27 |
| 21:37 | 21:47 | 21:56 | 22:05 | 22:14 | 22:23 |
| 22:32 | 22:41 | 22:50 | | | |

Horários Sábado (9 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:25 | 06:34 | 06:43 | 06:52 | 07:01 | 07:10 |
| 07:19 | 07:28 | 07:37 | 07:46 | 07:55 | 08:04 |
| 08:13 | 08:22 | 08:31 | 08:40 | 08:49 | 08:58 |
| 09:07 | 09:16 | 09:25 | 09:34 | 09:43 | 09:52 |
| 10:01 | 10:10 | 10:19 | 10:28 | 10:37 | 10:46 |
| 10:55 | 11:04 | 11:13 | 11:22 | 11:31 | 11:40 |
| 11:49 | 11:58 | 12:07 | 12:16 | 12:25 | 12:34 |
| 12:43 | 12:52 | 13:01 | 13:10 | 13:19 | 13:28 |
| 13:37 | 13:46 | 13:55 | 14:04 | 14:13 | 14:22 |
| 14:31 | 14:40 | 14:49 | 14:58 | 15:07 | 15:16 |
| 15:25 | 15:34 | 15:43 | 15:52 | 16:01 | 16:10 |
| 16:19 | 16:28 | 16:37 | 16:46 | 16:55 | 17:04 |
| 17:13 | 17:22 | 17:31 | 17:40 | 17:49 | 17:58 |
| 18:07 | 18:16 | 18:25 | 18:34 | 18:43 | 18:52 |
| 19:01 | 19:11 | 19:23 | 19:34 | 19:44 | 19:55 |
| 20:06 | 20:17 | 20:28 | 20:39 | 20:50 | 21:01 |
| 21:12 | 21:23 | 21:34 | 21:45 | 21:56 | 22:05 |
| 22:14 | 22:23 | 22:32 | 22:41 | 22:53 | 23:05 |
| 23:17 | | | | | |

Horários Sábado (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:40 | 05:50 | 06:00 | 06:09 | 06:18 | 06:27 |
| 06:36 | 06:45 | 06:54 | 07:03 | 07:12 | 07:21 |
| 07:30 | 07:39 | 07:48 | 07:57 | 08:06 | 08:15 |
| 08:24 | 08:33 | 08:42 | 08:51 | 09:00 | 09:09 |
| 09:18 | 09:27 | 09:36 | 09:45 | 09:54 | 10:03 |
| 10:12 | 10:21 | 10:30 | 10:39 | 10:48 | 10:57 |
| 11:06 | 11:15 | 11:24 | 11:33 | 11:42 | 11:51 |
| 12:00 | 12:09 | 12:18 | 12:27 | 12:36 | 12:45 |
| 12:54 | 13:03 | 13:12 | 13:21 | 13:30 | 13:39 |
| 13:48 | 13:57 | 14:06 | 14:15 | 14:24 | 14:33 |
| 14:42 | 14:51 | 15:00 | 15:09 | 15:18 | 15:27 |
| 15:36 | 15:45 | 15:54 | 16:03 | 16:12 | 16:21 |
| 16:30 | 16:39 | 16:48 | 16:57 | 17:06 | 17:15 |
| 17:24 | 17:33 | 17:42 | 17:51 | 18:00 | 18:09 |
| 18:18 | 18:27 | 18:36 | 18:45 | 18:54 | 19:03 |
| 19:12 | 19:23 | 19:34 | 19:45 | 19:56 | 20:07 |
| 20:18 | 20:29 | 20:40 | 20:51 | 21:02 | 21:13 |
| 21:24 | 21:35 | 21:46 | 21:57 | 22:08 | 22:19 |
| 22:30 | 22:42 | 22:54 | | | |

Horários Domingo (5 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:40 | 06:54 | 07:08 | 07:22 | 07:36 | 07:50 |
| 08:04 | 08:18 | 08:32 | 08:46 | 09:00 | 09:14 |
| 09:28 | 09:42 | 09:56 | 10:10 | 10:24 | 10:38 |
| 10:52 | 11:06 | 11:20 | 11:34 | 11:48 | 12:02 |
| 12:16 | 12:30 | 12:44 | 12:58 | 13:12 | 13:26 |
| 13:40 | 13:54 | 14:08 | 14:22 | 14:36 | 14:50 |
| 15:04 | 15:18 | 15:32 | 15:46 | 16:00 | 16:14 |
| 16:28 | 16:42 | 16:56 | 17:10 | 17:24 | 17:38 |
| 17:52 | 18:06 | 18:20 | 18:34 | 18:48 | 19:02 |
| 19:16 | 19:30 | 19:44 | 19:58 | 20:12 | 20:26 |
| 20:40 | 20:54 | 21:08 | 21:22 | 21:36 | 21:50 |
| 22:04 | 22:18 | 22:45 | 23:15 | | |

Horários Domingo (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:00 | 06:14 | 06:28 | 06:42 | 06:56 | 07:10 |
| 07:24 | 07:38 | 07:52 | 08:06 | 08:20 | 08:34 |
| 08:48 | 09:02 | 09:16 | 09:30 | 09:44 | 09:58 |
| 10:12 | 10:26 | 10:40 | 10:54 | 11:08 | 11:22 |
| 11:36 | 11:50 | 12:04 | 12:18 | 12:32 | 12:46 |
| 13:00 | 13:14 | 13:28 | 13:42 | 13:56 | 14:10 |
| 14:24 | 14:38 | 14:52 | 15:06 | 15:20 | 15:34 |
| 15:48 | 16:02 | 16:16 | 16:30 | 16:44 | 16:58 |
| 17:12 | 17:26 | 17:40 | 17:54 | 18:08 | 18:22 |
| 18:36 | 18:50 | 19:04 | 19:18 | 19:32 | 19:46 |
| 20:00 | 20:14 | 20:28 | 20:42 | 20:56 | 21:10 |
| 21:24 | 21:38 | 22:08 | 22:38 | | |

Itinerário (30 paradas)

Itinerário (30 paradas)

TERM SHOPPING IGUAATEMI - AV SEN DARCY RIBEIRO - AV IGUAATEMI - AC
ACESSO - AV IGUAATEMI - AV ROTARY - AV JOSE BONIFACIO - R HERMINIO
HUMBERTO BERTANI - AC ACESSO - AV DR MORAES SALLES - R CEL QUIRINO -
VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - R JOSE PAULINO - R JORGE
MIRANDA - AV JOAO PENIDO BURNIER - R DR MASCARENHAS - AV ANDRADE
NEVES - R DR BARBOSA DE BARROS - R DR OCTAVIO MENDES - R SALUSTIANO
PENTEADO - AV BR DE ITAPURA - AC ACESSO - SAIDA EXCLUSIVA TERMINAL
RODOVIARIO - AV BR DE ITAPURA - AC ACESSO - AV DR DAVID VICENTE - AV BR
DE ITAPURA - TERM TERMINAL METROPOLITANO - AV LIX DA CUNHA - AV DR
CAMPOS SALES - AV FRANCISCO GLICERIO - AV DR MORAES SALLES - ROD DR
HEITOR PENTEADO (SP-81) - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - AC
ACESSO - AV JOSE BONIFACIO - AV ROTARY - AC ACESSO - AV ROTARY - AV
IGUAATEMI - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUAATEMI

TERM SHOPPING IGUAATEMI - AV SEN DARCY RIBEIRO - AV IGUAATEMI - AC
ACESSO - AV IGUAATEMI - AV ROTARY - AV JOSE BONIFACIO - R HERMINIO
HUMBERTO BERTANI - AC ACESSO - AV DR MORAES SALLES - R CEL QUIRINO -
VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - R JOSE PAULINO - R JORGE
MIRANDA - AV JOAO PENIDO BURNIER - R DR MASCARENHAS - AV ANDRADE
NEVES - R DR BARBOSA DE BARROS - R DR OCTAVIO MENDES - R SALUSTIANO
PENTEADO - AV BR DE ITAPURA - AC ACESSO - SAIDA EXCLUSIVA TERMINAL
RODOVIARIO - AV BR DE ITAPURA - AC ACESSO - AV DR DAVID VICENTE - AV BR
DE ITAPURA - TERM TERMINAL METROPOLITANO - AV LIX DA CUNHA - AV DR
CAMPOS SALES - AV FRANCISCO GLICERIO - AV DR MORAES SALLES - ROD DR
HEITOR PENTEADO (SP-81) - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO -
AC ACESSO - AV JOSE BONIFACIO - AV ROTARY - AC ACESSO - AV ROTARY - AV
IGUAATEMI - AV SEN DARCY RIBEIRO - TERM SHOPPING IGUAATEMI

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Disque CIMCamp: (19)3772-1517

Site: www.emdec.com.br

Atualizado em 31/8/2015

Gerado por AutoBus/Geologica

Linha 395 - NOTRE DAME

Empresa: PADOVA

Ida: NOTRE DAME

Volta: ESTAÇÃO EXPEDICIONÁRIOS

Saindo de -
30,76 Km em 37 minutos**Horários Útil (2 veículos)**

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:50 | 06:27 | 07:04 | 07:41 | 08:18 | 08:55 |
| 10:14 | 11:28 | 12:42 | 13:56 | 15:10 | 15:47 |
| 16:24 | 17:01 | 17:38 | 18:15 | 18:52 | 20:12 |
| 21:26 | 22:40 | | | | |

Horários Sábado (1 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:27 | 07:41 | 08:55 | 10:14 | 11:28 | 12:42 |
| 13:56 | 15:10 | 16:24 | 17:38 | 18:52 | 20:12 |
| 21:26 | 22:40 | | | | |

Horários Domingo (1 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:27 | 07:41 | 08:55 | 15:10 | 16:24 | 17:38 |
|-------|-------|-------|-------|-------|-------|

Itinerário (51 paradas)

AV DOS EXPEDICIONARIOS - PCA MAL FLORIANO - AV ANDRADE NEVES - AV DR CAMPOS SALES - AV FRANCISCO GLICERIO - PCA BRASIL OUTROS QUINHENTOS - R PROENCA - AV PRSA D'OESTE - AC ACESSO - R CDE D'EU - AV IMPZ DONA TEREZA CRISTINA - AV CLAUDIO CELESTINO DE TOLEDO SOARES - AV IMPZ DONA TEREZA CRISTINA - R JOSE JORGE FARAH - R DR DOMINGOS ADEMAR BOLDRINI - AC ACESSO - R SALIM FERES - R UMBERTO PRIMEIRO TONTOLI - R RAUL FERRARI - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - R RENATO BENEDITO DE PETTA - R MTO LUIZ DE TULLIO - R FRANCISCA POMPEU DE CAMARGO - AV JOSE BONIFACIO - AV ROTARY - AV IGUATEMI - AV MACKENZIE - R EGBERTO FERREIRA DE ARRUDA CAMARGO - ROD DR HEITOR PENTEADO (SP-81) - R ANTONIO MARCHILLI - AV OSWALDO VON ZUBEN - R FRANCISCO MESQUITA - R MARINA VIEIRA DE CARVALHO MESQUITA - R MTO LUIZ DE TULLIO - R RENATO BENEDITO DE PETTA - R ELVINO SILVA - R FRANCISCA POMPEU DE CAMARGO - AV JOSE BONIFACIO - VD BRAZ SOARES FILHO - AC ACESSO - R RAUL FERRARI - R UMBERTO PRIMEIRO TONTOLI - R SALIM FERES - AC ACESSO - R DR DOMINGOS ADEMAR BOLDRINI - R MD MARIA SANTA MARGARIDA - R VICTORIO TOMAS DIAS DE CARVALHO - AV DR MANOEL AFONSO FERREIRA - AV IMPZ DONA TEREZA CRISTINA - AV CLAUDIO CELESTINO DE TOLEDO SOARES - PCA RAUL CELESTINO DE TOLEDO SOARES - AV CLAUDIO CELESTINO DE TOLEDO SOARES - AV IMPZ DONA TEREZA CRISTINA - R CDE D'EU - R BR DE PARANAPANEMA - R URUGUAIANA - R BOAVENTURA DO AMARAL - AV AQUIDABA - R JOSE PAULINO - R JORGE MIRANDA - AV JOAO PENIDO BURNIER - AV SEN SARAIVA - R COSTA AGUIAR - AV SEN SARAIVA - VD MIGUEL VICENTE CURY - PCA MAL FLORIANO - AV ANDRADE NEVES - AV DR CAMPOS SALES - AV DOS EXPEDICIONARIOS

Horários Útil (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:22 | 06:59 | 07:36 | 08:13 | 08:50 | 09:27 |
| 10:46 | 12:00 | 13:14 | 14:28 | 15:42 | 16:19 |
| 16:56 | 17:33 | 18:10 | 18:47 | 19:24 | 20:44 |
| 21:58 | | | | | |

Horários Sábado (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:59 | 08:13 | 09:27 | 10:46 | 12:00 | 13:14 |
| 14:28 | 15:42 | 16:56 | 18:10 | 19:24 | 20:44 |
| 21:58 | | | | | |

Horários Domingo (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:59 | 08:13 | 09:27 | 15:42 | 16:56 | 18:10 |
|-------|-------|-------|-------|-------|-------|

Itinerário (51 paradas)

AV DOS EXPEDICIONARIOS - PCA MAL FLORIANO - AV ANDRADE NEVES - AV DR CAMPOS SALES - AV FRANCISCO GLICERIO - PCA BRASIL OUTROS QUINHENTOS - R PROENCA - AV PRSA D'OESTE - AC ACESSO - R CDE D'EU - AV IMPZ DONA TEREZA CRISTINA - AV CLAUDIO CELESTINO DE TOLEDO SOARES - AV IMPZ DONA TEREZA CRISTINA - R JOSE JORGE FARAH - R DR DOMINGOS ADEMAR BOLDRINI - AC ACESSO - R SALIM FERES - R UMBERTO PRIMEIRO TONTOLI - R RAUL FERRARI - VD BRAZ SOARES FILHO - AV JOSE BONIFACIO - R RENATO BENEDITO DE PETTA - R MTO LUIZ DE TULLIO - R FRANCISCA POMPEU DE CAMARGO - AV JOSE BONIFACIO - AV ROTARY - AV IGUATEMI - AV MACKENZIE - R EGBERTO FERREIRA DE ARRUDA CAMARGO - ROD DR HEITOR PENTEADO (SP-81) - R ANTONIO MARCHILLI - AV OSWALDO VON ZUBEN - R FRANCISCO MESQUITA - R MARINA VIEIRA DE CARVALHO MESQUITA - R MTO LUIZ DE TULLIO - R RENATO BENEDITO DE PETTA - R ELVINO SILVA - R FRANCISCA POMPEU DE CAMARGO - AV JOSE BONIFACIO - VD BRAZ SOARES FILHO - AC ACESSO - R RAUL FERRARI - R UMBERTO PRIMEIRO TONTOLI - R SALIM FERES - AC ACESSO - R DR DOMINGOS ADEMAR BOLDRINI - R MD MARIA SANTA MARGARIDA - R VICTORIO TOMAS DIAS DE CARVALHO - AV DR MANOEL AFONSO FERREIRA - AV IMPZ DONA TEREZA CRISTINA - AV CLAUDIO CELESTINO DE TOLEDO SOARES - PCA RAUL CELESTINO DE TOLEDO SOARES - AV CLAUDIO CELESTINO DE TOLEDO SOARES - AV IMPZ DONA TEREZA CRISTINA - R CDE D'EU - R BR DE PARANAPANEMA - R URUGUAIANA - R BOAVENTURA DO AMARAL - AV AQUIDABA - R JOSE PAULINO - R JORGE MIRANDA - AV JOAO PENIDO BURNIER - AV SEN SARAIVA - R COSTA AGUIAR - AV SEN SARAIVA - VD MIGUEL VICENTE CURY - PCA MAL FLORIANO - AV ANDRADE NEVES - AV DR CAMPOS SALES - AV DOS EXPEDICIONARIOS

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Atualizado em 31/8/2015

Gerado por AutoBus/Geologica



Linha 397 - GRAMADO (INCLUSIVO)

Esta linha opera com uma linha derivada conjugada a esta Ordem de Serviço e os horários do PT2 são d

Empresa: COTALCAMP

Ida: RODOVIARIA

Volta: GRAMADO

Saindo de -
23,92 Km em 40 minutos

Horários Útil (4 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:58 | 06:15 | 06:44 | 07:14 | 07:34 | 08:04 |
| 08:34 | 08:54 | 09:14 | 09:34 | 09:54 | 10:14 |
| 10:34 | 10:54 | 11:14 | 11:34 | 11:54 | 12:14 |
| 12:34 | 12:54 | 13:14 | 13:34 | 13:54 | 14:14 |
| 14:34 | 14:54 | 15:14 | 15:34 | 15:54 | 16:14 |
| 16:34 | 16:54 | 17:14 | 17:34 | 17:54 | 18:14 |
| 18:34 | 18:50 | 19:30 | 20:10 | 20:50 | 21:25 |
| 22:00 | | | | | |

Horários Útil (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:20 | 05:45 | 06:05 | 06:35 | 06:55 | 07:25 |
| 07:55 | 08:14 | 08:34 | 08:54 | 09:14 | 09:34 |
| 09:54 | 10:14 | 10:34 | 10:54 | 11:14 | 11:34 |
| 11:54 | 12:14 | 12:34 | 12:54 | 13:14 | 13:34 |
| 13:54 | 14:14 | 14:34 | 14:54 | 15:14 | 15:34 |
| 15:54 | 16:14 | 16:34 | 16:54 | 17:14 | 17:34 |
| 17:54 | 18:14 | 18:34 | 18:50 | 19:30 | 20:10 |
| 20:50 | 21:25 | 22:00 | | | |

Horários Sábado (4 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:51 | 06:09 | 06:27 | 06:45 | 07:03 | 07:21 |
| 07:39 | 07:57 | 08:30 | 08:48 | 09:06 | 09:24 |
| 09:42 | 10:00 | 10:18 | 10:36 | 10:54 | 11:12 |
| 11:30 | 11:48 | 12:06 | 12:24 | 12:42 | 13:00 |
| 13:28 | 13:46 | 14:04 | 14:22 | 14:40 | 14:58 |
| 15:16 | 15:34 | 15:52 | 16:10 | 16:28 | 16:45 |
| 17:20 | 17:55 | 18:30 | 19:05 | 19:40 | 20:15 |
| 21:00 | 21:30 | 22:00 | | | |

Horários Sábado (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:15 | 05:33 | 05:51 | 06:09 | 06:27 | 06:45 |
| 07:03 | 07:21 | 07:39 | 07:57 | 08:15 | 08:33 |
| 09:06 | 09:24 | 09:42 | 10:00 | 10:18 | 10:36 |
| 10:54 | 11:12 | 11:30 | 11:48 | 12:06 | 12:24 |
| 12:42 | 13:00 | 13:18 | 13:36 | 14:04 | 14:22 |
| 14:40 | 14:58 | 15:16 | 15:34 | 15:52 | 16:10 |
| 16:45 | 17:20 | 17:55 | 18:30 | 19:05 | 19:40 |
| 20:15 | 21:00 | 21:30 | 22:00 | | |

Horários Domingo (2 veículos)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 06:05 | 06:40 | 07:15 | 07:50 | 08:25 | 09:15 |
| 09:50 | 10:25 | 11:00 | 11:35 | 12:10 | 12:45 |
| 13:20 | 13:55 | 14:30 | 15:05 | 15:40 | 16:15 |
| 16:50 | 17:25 | 18:00 | 18:45 | 19:50 | 20:55 |
| 22:00 | | | | | |

Horários Domingo (Referência)

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 05:25 | 06:00 | 06:35 | 07:10 | 07:45 | 08:20 |
| 08:55 | 09:45 | 10:20 | 10:55 | 11:30 | 12:05 |
| 12:40 | 13:15 | 13:50 | 14:25 | 15:00 | 15:35 |
| 16:10 | 16:45 | 17:20 | 17:55 | 19:15 | 20:20 |
| 21:25 | 22:30 | | | | |

Itinerário (52 paradas)

SEM DENOMINAÇÃO - AV PROFA DEA EHRHARDT CARVALHO - R ELIZEU TEIXEIRA DE CAMARGO - AL DAS TIPUANAS - AL DOS CAMBARAS - AL DOS FLAMBOYANT - R NABIHA WAQUIM ABRAHAO - AV PAPA JOAO PAULO I - R ERNESTO ZIGGIATTI - ROD DR HEITOR PENTEADO (SP-81) - AV DR MORAES SALLES - R CEL QUIRINO - VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - R JOSE PAULINO - AV BENJAMIN CONSTANT - R DR RICARDO - R SEBASTIAO DE SOUZA - R ONZE DE AGOSTO - AV DR CAMPOS SALES - AV FRANCISCO GLICERIO - AV DR MORAES SALLES - ROD DR HEITOR PENTEADO (SP-81) - AV PAPA JOAO PAULO I - R NABIHA WAQUIM ABRAHAO - AL DOS FLAMBOYANT - AL DOS CAMBARAS - AL DAS TIPUANAS - R ELIZEU TEIXEIRA DE CAMARGO - AV PROFA DEA EHRHARDT CARVALHO - SEM DENOMINAÇÃO

Itinerário (52 paradas)

SEM DENOMINAÇÃO - AV PROFA DEA EHRHARDT CARVALHO - R ELIZEU TEIXEIRA DE CAMARGO - AL DAS TIPUANAS - AL DOS CAMBARAS - AL DOS FLAMBOYANT - R NABIHA WAQUIM ABRAHAO - AV PAPA JOAO PAULO I - R ERNESTO ZIGGIATTI - ROD DR HEITOR PENTEADO (SP-81) - AV DR MORAES SALLES - R CEL QUIRINO - VIA EXPR WALDEMAR PASCHOAL - AV AQUIDABA - R JOSE PAULINO - AV BENJAMIN CONSTANT - R DR RICARDO - R SEBASTIAO DE SOUZA - R ONZE DE AGOSTO - AV DR CAMPOS SALES - AV FRANCISCO GLICERIO - AV DR MORAES SALLES - ROD DR HEITOR PENTEADO (SP-81) - AV PAPA JOAO PAULO I - R NABIHA WAQUIM ABRAHAO - AL DOS FLAMBOYANT - AL DOS CAMBARAS - AL DAS TIPUANAS - R ELIZEU TEIXEIRA DE CAMARGO - AV PROFA DEA EHRHARDT CARVALHO - SEM DENOMINAÇÃO

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Disque CIMCamp: (19)3772-1517

Site: www.emdec.com.br

Atualizado em 28/3/2016

Gerado por AutoBus/Geologista

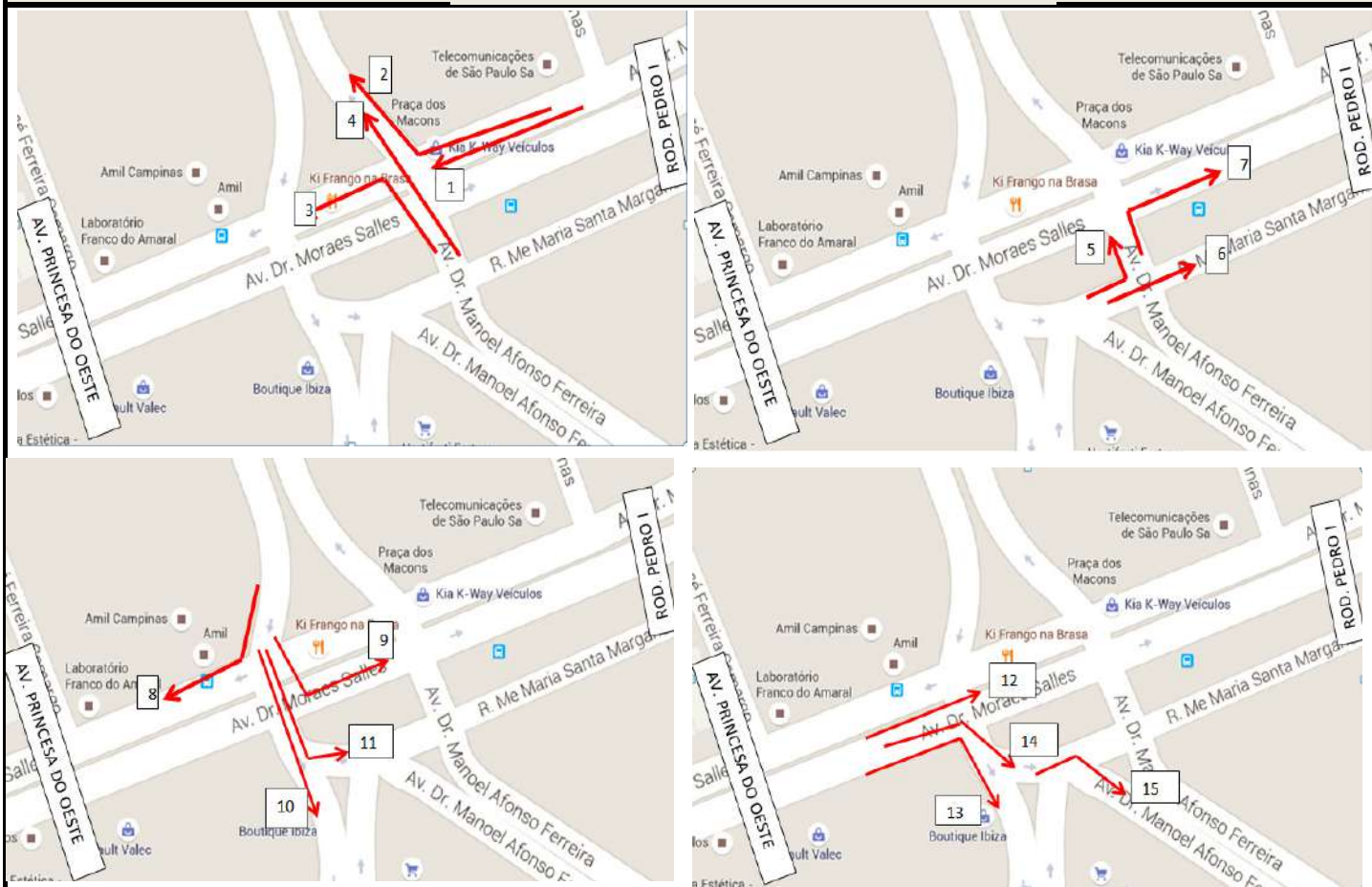


AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

ANEXO 2 – CONTAGENS VEICULARES

CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | | TERÇA FEIRA 23 DE FEVEREIRO DE 2016 | | | | | | | % Veículos Comerciais | | FATOR | Pedestre | | |
|-----------|-------|-------------------------------------|------|-----|------|-------|-------|--------|-----------------------|------|-------|----------|-------|---|
| | | TERÇA FEIRA 23 DE FEVEREIRO DE 2016 | | | | | | | Onib.+ Cam. | | HORA | HP | Total | |
| | | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | Onib. | Cam. | PICO | | Cont. | |
| M 1 | Manhã | 1786 | 45 | 21 | 67 | 0 | 1.919 | 1.952 | 3,4% | 1,1% | 0,85 | P1 | 0 | 0 |
| | Tarde | 1245 | 53 | 6 | 120 | 0 | 1.424 | 1.423 | 4,1% | 0,4% | 0,84 | | 0 | 0 |
| M 2 | Manhã | 261 | 0 | 7 | 14 | 0 | 282 | 282 | 2,5% | 2,5% | 0,78 | P2 | 0 | 0 |
| | Tarde | 241 | 0 | 0 | 12 | 0 | 253 | 247 | 0,0% | 0,0% | 0,71 | | 0 | 0 |
| M 3 | Manhã | 200 | 0 | 3 | 31 | 0 | 234 | 222 | 1,3% | 1,3% | 0,55 | P3 | 0 | 0 |
| | Tarde | 158 | 0 | 0 | 20 | 0 | 178 | 168 | 0,0% | 0,0% | 0,81 | | 0 | 0 |
| M 4 | Manhã | 68 | 1 | 2 | 13 | 0 | 84 | 81 | 3,6% | 2,4% | 0,88 | P4 | 0 | 0 |
| | Tarde | 76 | 0 | 3 | 15 | 0 | 94 | 90 | 3,2% | 3,2% | 0,84 | | 0 | 0 |
| M 5 | Manhã | 475 | 3 | 6 | 32 | 0 | 516 | 509 | 1,7% | 1,2% | 0,84 | P5 | 0 | 0 |
| | Tarde | 545 | 1 | 4 | 27 | 0 | 577 | 569 | 0,9% | 0,7% | 0,80 | | 0 | 0 |
| M 6 | Manhã | 213 | 2 | 3 | 5 | 0 | 223 | 226 | 2,2% | 1,3% | 0,49 | P6 | 0 | 0 |
| | Tarde | 236 | 0 | 0 | 6 | 0 | 242 | 239 | 0,0% | 0,0% | 0,83 | | 0 | 0 |
| M 7 | Manhã | 94 | 1 | 3 | 3 | 0 | 101 | 104 | 4,0% | 3,0% | 0,77 | P7 | 0 | 0 |
| | Tarde | 140 | 3 | 2 | 2 | 0 | 147 | 151 | 3,4% | 1,4% | 0,67 | | 0 | 0 |
| M 8 | Manhã | 131 | 1 | 3 | 7 | 0 | 142 | 143 | 2,8% | 2,1% | 0,87 | P8 | 0 | 0 |
| | Tarde | 87 | 0 | 2 | 7 | 0 | 96 | 95 | 2,1% | 2,1% | 0,53 | | 0 | 0 |
| M 9 | Manhã | 99 | 0 | 1 | 0 | 0 | 100 | 101 | 1,0% | 1,0% | 0,81 | P9 | 0 | 0 |
| | Tarde | 180 | 1 | 1 | 3 | 0 | 185 | 186 | 1,1% | 0,5% | 0,76 | | 0 | 0 |
| M 10 | Manhã | 399 | 3 | 2 | 21 | 0 | 425 | 420 | 1,2% | 0,5% | 0,87 | | | |
| | Tarde | 582 | 7 | 0 | 35 | 0 | 624 | 614 | 1,1% | 0,0% | 0,88 | | | |
| M 11 | Manhã | 91 | 1 | 2 | 6 | 0 | 100 | 100 | 3,0% | 2,0% | 0,52 | | | |
| | Tarde | 205 | 0 | 1 | 25 | 0 | 231 | 220 | 0,4% | 0,4% | 0,78 | | | |
| M 12 | Manhã | 1469 | 53 | 31 | 127 | 0 | 1.680 | 1.701 | 5,0% | 1,8% | 0,91 | | | |
| | Tarde | 1445 | 39 | 11 | 72 | 0 | 1.567 | 1.581 | 3,2% | 0,7% | 0,80 | | | |
| M 13 | Manhã | 45 | 0 | 1 | 0 | 0 | 46 | 47 | 2,2% | 2,2% | 0,58 | | | |
| | Tarde | 25 | 0 | 0 | 1 | 0 | 26 | 26 | 0,0% | 0,0% | 0,54 | | | |
| M 14 | Manhã | 300 | 3 | 4 | 27 | 0 | 334 | 328 | 2,1% | 1,2% | 0,72 | | | |
| | Tarde | 387 | 4 | 3 | 36 | 0 | 430 | 419 | 1,6% | 0,7% | 0,85 | | | |
| M 15 | Manhã | 147 | 1 | 2 | 18 | 0 | 168 | 162 | 1,8% | 1,2% | 0,55 | | | |
| | Tarde | 279 | 3 | 0 | 33 | 0 | 315 | 302 | 1,0% | 0,0% | 0,67 | | | |

CONTAGEM VEÍCULAR CLASSIFICADA



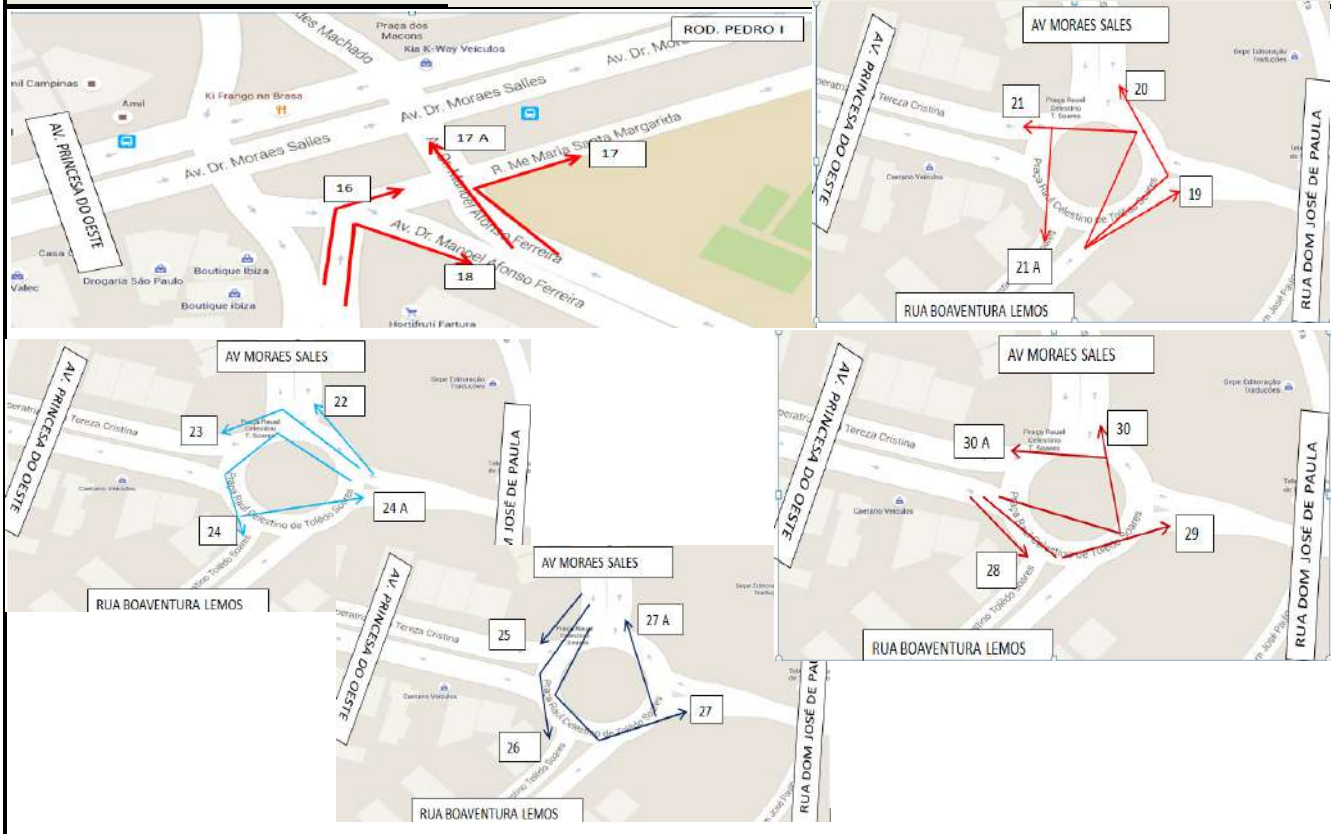
VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | EIRA 23 DE FEVEREIRO | | | | 13:00 as 14:00 | | | |
|-----------|----------------------|------|-----|------|----------------|-------|--------|-------|
| | EIRA 23 DE FEVEREIRO | | | | 00:00 as 01:00 | | | |
| | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | |
| M 1 | Almoço | 1361 | 29 | 23 | 68 | 0 | 1.481 | 1.499 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 2 | Almoço | 243 | 0 | 2 | 19 | 0 | 264 | 257 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 3 | Almoço | 192 | 0 | 4 | 15 | 0 | 211 | 208 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 4 | Almoço | 28 | 0 | 2 | 2 | 0 | 32 | 33 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 5 | Almoço | 429 | 0 | 9 | 42 | 0 | 480 | 468 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 6 | Almoço | 202 | 0 | 3 | 12 | 0 | 217 | 214 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 7 | Almoço | 94 | 1 | 5 | 3 | 0 | 103 | 108 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 8 | Almoço | 165 | 0 | 1 | 15 | 0 | 181 | 175 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 9 | Almoço | 150 | 0 | 1 | 5 | 0 | 156 | 155 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 10 | Almoço | 353 | 0 | 3 | 26 | 0 | 382 | 372 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 11 | Almoço | 147 | 1 | 5 | 11 | 0 | 164 | 165 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 12 | Almoço | 1100 | 19 | 25 | 77 | 0 | 1.221 | 1.227 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 13 | Almoço | 34 | 0 | 1 | 2 | 0 | 37 | 37 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 14 | Almoço | 380 | 0 | 4 | 45 | 0 | 429 | 411 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 15 | Almoço | 198 | 0 | 6 | 21 | 0 | 225 | 221 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| % Veículos Comerciais | | FATOR HORA PICO |
|-----------------------|------|-----------------|
| Onib.+ Cam. | Cam. | |
| 3,5% | 1,6% | 0,86 |
| 0,0% | 0,0% | |
| 0,8% | 0,8% | 0,83 |
| 0,0% | 0,0% | |
| 1,9% | 1,9% | 0,86 |
| 0,0% | 0,0% | |
| 6,3% | 6,3% | 0,67 |
| 0,0% | 0,0% | |
| 1,9% | 1,9% | 0,94 |
| 0,0% | 0,0% | |
| 1,4% | 1,4% | 0,88 |
| 0,0% | 0,0% | |
| 5,8% | 4,9% | 0,83 |
| 0,0% | 0,0% | |
| 0,6% | 0,6% | 0,87 |
| 0,0% | 0,0% | |
| 0,6% | 0,6% | 0,87 |
| 0,0% | 0,0% | |
| 0,8% | 0,8% | 0,84 |
| 0,0% | 0,0% | |
| 3,7% | 3,0% | 0,87 |
| 0,0% | 0,0% | |
| 3,6% | 2,0% | 0,93 |
| 0,0% | 0,0% | |
| 2,7% | 2,7% | 0,71 |
| 0,0% | 0,0% | |
| 0,9% | 0,9% | 0,86 |
| 0,0% | 0,0% | |
| 2,7% | 2,7% | 0,88 |
| 0,0% | 0,0% | |

| Pedestre | | |
|----------|-------------|---|
| HP | Total Cont. | |
| | 0 | 0 |
| P1 | 0 | 0 |
| | 0 | 0 |
| P2 | 0 | 0 |
| | 0 | 0 |
| P3 | 0 | 0 |
| | 0 | 0 |
| P4 | 0 | 0 |
| | 0 | 0 |
| P5 | 0 | 0 |
| | 0 | 0 |
| P6 | 0 | 0 |
| | 0 | 0 |
| P7 | 0 | 0 |
| | 0 | 0 |
| P8 | 0 | 0 |
| | 0 | 0 |
| P9 | 0 | 0 |

CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | | TERÇA FEIRA, 23 DE FEVEREIRO DE 2016 | | | | | | | % Veículos Comerciais | | | Pedestre | | |
|-----------|-------|--------------------------------------|------|-----|------|-------|-------|--------|-----------------------|-------|-----------------|----------|-------------|---|
| | | TERÇA FEIRA, 23 DE FEVEREIRO DE 2016 | | | | | | | Onib.+ Cam. | | HP | | | |
| | | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | Onib.+ Cam. | Cam. | FATOR HORA PICO | HP | Total Cont. | |
| M 16 | Manhã | 370 | 3 | 4 | 18 | 0 | 395 | 393 | 1,8% | 1,0% | 0,89 | P1 | 0 | 0 |
| | Tarde | 411 | 1 | 0 | 16 | 0 | 428 | 421 | 0,2% | 0,0% | 0,78 | | 0 | 0 |
| M 17 | Manhã | 50 | 0 | 1 | 3 | 0 | 54 | 54 | 1,9% | 1,9% | 0,64 | P2 | 0 | 0 |
| | Tarde | 53 | 0 | 0 | 0 | 0 | 53 | 53 | 0,0% | 0,0% | 0,66 | | 0 | 0 |
| M 17-A | Manhã | 20 | 0 | 0 | 0 | 0 | 20 | 20 | 0,0% | 0,0% | 0,56 | P3 | 0 | 0 |
| | Tarde | 36 | 0 | 0 | 0 | 0 | 36 | 36 | 0,0% | 0,0% | 0,69 | | 0 | 0 |
| M 18 | Manhã | 20 | 0 | 0 | 0 | 0 | 20 | 20 | 0,0% | 0,0% | 0,56 | P4 | 0 | 0 |
| | Tarde | 36 | 0 | 0 | 0 | 0 | 36 | 36 | 0,0% | 0,0% | 0,69 | | 0 | 0 |
| M 19 | Manhã | 226 | 1 | 1 | 11 | 0 | 239 | 236 | 0,8% | 0,4% | 0,88 | P5 | 0 | 0 |
| | Tarde | 157 | 0 | 1 | 8 | 0 | 166 | 163 | 0,6% | 0,6% | 0,86 | | 0 | 0 |
| M 20 | Manhã | 249 | 1 | 0 | 27 | 0 | 277 | 265 | 0,4% | 0,0% | 0,74 | P6 | 0 | 0 |
| | Tarde | 160 | 0 | 0 | 12 | 0 | 172 | 166 | 0,0% | 0,0% | 0,81 | | 0 | 0 |
| M 21 | Manhã | 5 | 0 | 0 | 0 | 0 | 5 | 5 | 0,0% | 0,0% | 0,42 | P7 | 0 | 0 |
| | Tarde | 9 | 0 | 1 | 0 | 0 | 10 | 11 | 10,0% | 10,0% | 0,50 | | 0 | 0 |
| M 21-A | Manhã | 4 | 0 | 0 | 0 | 0 | 4 | 4 | 0,0% | 0,0% | 0,50 | P8 | 0 | 0 |
| | Tarde | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0,0% | 0,0% | 0,50 | | 0 | 0 |
| M 22 | Manhã | 28 | 0 | 0 | 2 | 0 | 30 | 29 | 0,0% | 0,0% | 0,54 | P9 | 0 | 0 |
| | Tarde | 35 | 1 | 0 | 2 | 0 | 38 | 38 | 2,6% | 0,0% | 0,59 | | 0 | 0 |
| M 23 | Manhã | 167 | 2 | 2 | 7 | 0 | 178 | 179 | 2,2% | 1,1% | 0,82 | P10 | 0 | 0 |
| | Tarde | 291 | 1 | 2 | 14 | 0 | 308 | 304 | 1,0% | 0,6% | 0,88 | | 0 | 0 |
| M 24 | Manhã | 70 | 0 | 0 | 2 | 0 | 72 | 71 | 0,0% | 0,0% | 0,72 | | 0 | 0 |
| | Tarde | 108 | 0 | 0 | 7 | 0 | 115 | 112 | 0,0% | 0,0% | 0,72 | | 0 | 0 |
| M 24-A | Manhã | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0,0% | 0,0% | 0,25 | | 0 | 0 |
| | Tarde | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,0% | 0,0% | | | 0 | 0 |
| M 25 | Manhã | 216 | 2 | 0 | 7 | 0 | 225 | 224 | 0,9% | 0,0% | 0,91 | | 0 | 0 |
| | Tarde | 344 | 6 | 0 | 12 | 0 | 362 | 362 | 1,7% | 0,0% | 0,93 | | 0 | 0 |
| M 26 | Manhã | 179 | 0 | 3 | 11 | 0 | 193 | 191 | 1,6% | 1,6% | 0,88 | | 0 | 0 |
| | Tarde | 268 | 1 | 0 | 27 | 0 | 296 | 284 | 0,3% | 0,0% | 0,75 | | 0 | 0 |
| M 27 | Manhã | 21 | 0 | 2 | 1 | 0 | 24 | 26 | 8,3% | 8,3% | 0,75 | | 0 | 0 |
| | Tarde | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 0,0% | 0,0% | 0,42 | | 0 | 0 |
| M 27-A | Manhã | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0,0% | 0,0% | 0,25 | | 0 | 0 |
| | Tarde | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 0,0% | 0,0% | 0,38 | | 0 | 0 |
| M 28 | Manhã | 6 | 0 | 0 | 1 | 0 | 7 | 7 | 0,0% | 0,0% | 0,58 | | 0 | 0 |
| | Tarde | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 0,0% | 0,0% | 0,75 | | 0 | 0 |
| M 29 | Manhã | 234 | 3 | 7 | 14 | 0 | 258 | 261 | 3,9% | 2,7% | 0,95 | | 0 | 0 |
| | Tarde | 223 | 2 | 3 | 16 | 0 | 244 | 241 | 2,0% | 1,2% | 0,78 | | 0 | 0 |
| M 30 | Manhã | 159 | 1 | 1 | 8 | 0 | 169 | 167 | 1,2% | 0,6% | 0,72 | | 0 | 0 |
| | Tarde | 153 | 0 | 2 | 3 | 0 | 158 | 159 | 1,3% | 1,3% | 0,94 | | 0 | 0 |
| M 30-A | Manhã | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0,0% | 0,0% | 0,25 | | 0 | 0 |
| | Tarde | 4 | 0 | 1 | 0 | 0 | 5 | 6 | 20,0% | 20,0% | 0,42 | | 0 | 0 |

CONTAGEM VEÍCULAR CLASSIFICADA



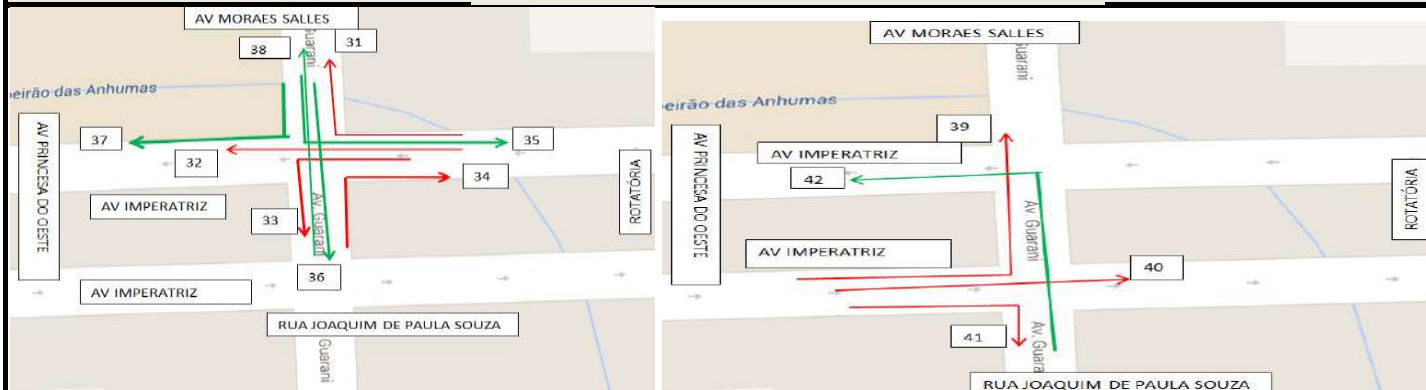
VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | FEIRA 23 DE FEVEREIRO | | 13:00 as 14:00 | | 14:00 as 01:00 | | | |
|-----------|-----------------------|------|----------------|------|----------------|-------|--------|-----|
| | FEIRA 23 DE FEVEREIRO | | 00:00 as 01:00 | | | | | |
| | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | |
| M 16 | Almoço | 257 | 0 | 5 | 23 | 0 | 285 | 279 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 17 | Almoço | 48 | 0 | 0 | 2 | 0 | 50 | 49 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 17-A | Almoço | | | | | | | |
| | Janta | | | | | | | |
| M 18 | Almoço | 22 | 0 | 0 | 3 | 0 | 25 | 24 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 19 | Almoço | 101 | 1 | 3 | 7 | 0 | 112 | 113 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 20 | Almoço | 103 | 0 | 0 | 14 | 0 | 117 | 110 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 21 | Almoço | 3 | 0 | 0 | 0 | 0 | 3 | 3 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 21-A | Almoço | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 22 | Almoço | 27 | 0 | 0 | 0 | 0 | 27 | 27 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 23 | Almoço | 156 | 1 | 4 | 7 | 0 | 168 | 170 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 24 | Almoço | 51 | 0 | 0 | 4 | 0 | 55 | 53 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 24-A | Almoço | 3 | 0 | 0 | 0 | 0 | 3 | 3 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 25 | Almoço | 187 | 0 | 4 | 9 | 0 | 200 | 200 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 26 | Almoço | 133 | 0 | 4 | 17 | 0 | 154 | 150 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 27 | Almoço | 19 | 0 | 1 | 1 | 0 | 21 | 22 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 27-A | Almoço | 2 | 0 | 0 | 0 | 0 | 2 | 2 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 28 | Almoço | 6 | 0 | 1 | 1 | 0 | 8 | 9 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 29 | Almoço | 133 | 1 | 0 | 8 | 0 | 142 | 139 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 30 | Almoço | 116 | 0 | 1 | 6 | 0 | 123 | 121 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 30-A | Almoço | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| % Veículos Comerciais | | FATOR HORA PICO |
|-----------------------|-------|-----------------|
| Onib.+ Cam. | Cam. | |
| 1,8% | 1,8% | 0,83 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,78 |
| 0,0% | 0,0% | |
| | | |
| | | |
| 0,0% | 0,0% | 0,52 |
| 0,0% | 0,0% | |
| 3,6% | 2,7% | 0,85 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,79 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,25 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,33 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,84 |
| 0,0% | 0,0% | |
| 3,0% | 2,4% | 0,81 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,63 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,38 |
| 0,0% | 0,0% | |
| 2,0% | 2,0% | 0,86 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,84 |
| 0,0% | 0,0% | |
| 4,8% | 4,8% | 0,66 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,25 |
| 0,0% | 0,0% | |
| 12,5% | 12,5% | 0,50 |
| 0,0% | 0,0% | |
| 0,7% | 0,0% | 0,89 |
| 0,0% | 0,0% | |
| 0,8% | 0,8% | 0,73 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,13 |
| 0,0% | 0,0% | |

| Pedestre | |
|----------|-------------|
| HP | Total Cont. |
| | 0 |
| P1 | 0 |
| | 0 |
| P2 | 0 |
| | 0 |
| P3 | 0 |
| | 0 |
| P4 | 0 |
| | 0 |
| P5 | 0 |
| | 0 |
| P6 | 0 |
| | 0 |
| P7 | 0 |
| | 0 |
| P8 | 0 |
| | 0 |
| P9 | 0 |
| | 0 |
| P10 | 0 |
| | 0 |
| P11 | 0 |
| | 0 |
| P12 | 0 |
| | 0 |
| P13 | 0 |
| | 0 |

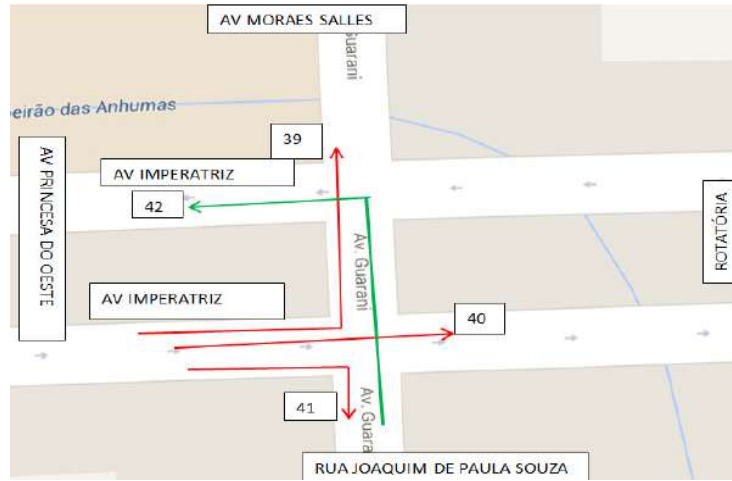
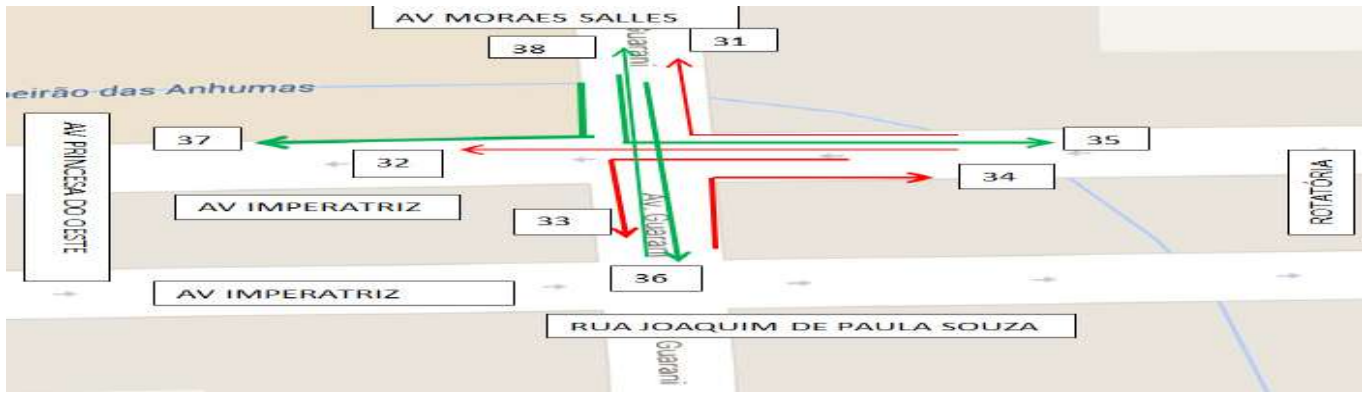
CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | | QUARTA FEIRA 24 DE FEVEREIRO DE 2016 | | | | | | | % Veículos Comerciais | | FATOR | Pedestre | | |
|-----------|-------|--------------------------------------|------|-----|------|-------|-------|--------|-----------------------|------|-------|----------|-------|---|
| | | QUARTA FEIRA 24 DE FEVEREIRO DE 2016 | | | | | | | Onib.+ Cam. | | HORA | HP | Total | |
| | | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | Onib. | Cam. | PICO | | Cont. | |
| M 31 | Manhã | 10 | 1 | 0 | 0 | 0 | 11 | 12 | 9,1% | 0,0% | 0,69 | P1 | 0 | 0 |
| | Tarde | 14 | 0 | 1 | 0 | 0 | 15 | 16 | 6,7% | 6,7% | 0,54 | | 0 | 0 |
| M 32 | Manhã | 373 | 7 | 2 | 39 | 0 | 421 | 411 | 2,1% | 0,5% | 0,84 | P2 | 0 | 0 |
| | Tarde | 387 | 10 | 3 | 26 | 0 | 426 | 426 | 3,1% | 0,7% | 0,79 | | 0 | 0 |
| M 33 | Manhã | 104 | 1 | 1 | 5 | 0 | 111 | 111 | 1,8% | 0,9% | 0,66 | P3 | 0 | 0 |
| | Tarde | 185 | 5 | 1 | 2 | 0 | 193 | 198 | 3,1% | 0,5% | 0,77 | | 0 | 0 |
| M 34 | Manhã | 17 | 0 | 0 | 0 | 0 | 17 | 17 | 0,0% | 0,0% | 0,61 | P4 | 0 | 0 |
| | Tarde | 23 | 0 | 0 | 1 | 0 | 24 | 24 | 0,0% | 0,0% | 0,60 | | 0 | 0 |
| M 35 | Manhã | 7 | 0 | 0 | 1 | 0 | 8 | 8 | 0,0% | 0,0% | 0,40 | P5 | 0 | 0 |
| | Tarde | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 0,0% | 0,0% | 0,54 | | 0 | 0 |
| M 36 | Manhã | 38 | 0 | 0 | 1 | 0 | 39 | 39 | 0,0% | 0,0% | 0,70 | P6 | 0 | 0 |
| | Tarde | 71 | 0 | 0 | 3 | 0 | 74 | 73 | 0,0% | 0,0% | 0,54 | | 0 | 0 |
| M 37 | Manhã | 61 | 0 | 0 | 0 | 0 | 61 | 61 | 0,0% | 0,0% | 0,76 | P7 | 0 | 0 |
| | Tarde | 76 | 1 | 0 | 2 | 0 | 79 | 79 | 1,3% | 0,0% | 0,49 | | 0 | 0 |
| M 38 | Manhã | 98 | 0 | 2 | 1 | 0 | 101 | 103 | 2,0% | 2,0% | 0,81 | P8 | 0 | 0 |
| | Tarde | 44 | 0 | 0 | 0 | 0 | 44 | 44 | 0,0% | 0,0% | 0,79 | | 0 | 0 |
| M 39 | Manhã | 402 | 3 | 7 | 13 | 0 | 425 | 429 | 2,4% | 1,6% | 0,92 | P9 | 0 | 0 |
| | Tarde | 197 | 1 | 1 | 5 | 0 | 204 | 204 | 1,0% | 0,5% | 0,82 | | 0 | 0 |
| M 40 | Manhã | 448 | 12 | 6 | 25 | 0 | 491 | 497 | 3,7% | 1,2% | 0,88 | | | |
| | Tarde | 438 | 9 | 1 | 26 | 0 | 474 | 471 | 2,1% | 0,2% | 0,95 | | | |
| M 41 | Manhã | 20 | 0 | 0 | 0 | 0 | 20 | 20 | 0,0% | 0,0% | 0,42 | | | |
| | Tarde | 33 | 0 | 0 | 1 | 0 | 34 | 34 | 0,0% | 0,0% | 0,57 | | | |
| M 42 | Manhã | 28 | 0 | 0 | 1 | 0 | 29 | 29 | 0,0% | 0,0% | 0,81 | | | |
| | Tarde | 11 | 1 | 0 | 1 | 0 | 13 | 14 | 7,7% | 0,0% | 0,20 | | | |
| M 43 | Manhã | 1.095 | 17 | 13 | 59 | 0 | 1.184 | 1.185 | 2,5% | 1,1% | 0,95 | | | |
| | Tarde | 1.796 | 17 | 4 | 82 | 0 | 1.899 | 1.879 | 1,1% | 0,2% | 0,92 | | | |
| M 44 | Manhã | 23 | 0 | 1 | 1 | 0 | 25 | 26 | 4,0% | 4,0% | 0,48 | | | |
| | Tarde | 36 | 0 | 0 | 3 | 0 | 39 | 38 | 0,0% | 0,0% | 0,61 | | | |
| M 45 | Manhã | 66 | 0 | 1 | 0 | 0 | 67 | 68 | 1,5% | 1,5% | 0,62 | | | |
| | Tarde | 100 | 0 | 2 | 1 | 0 | 103 | 105 | 1,9% | 1,9% | 0,80 | | | |

CONTAGEM VEÍCULAR CLASSIFICADA



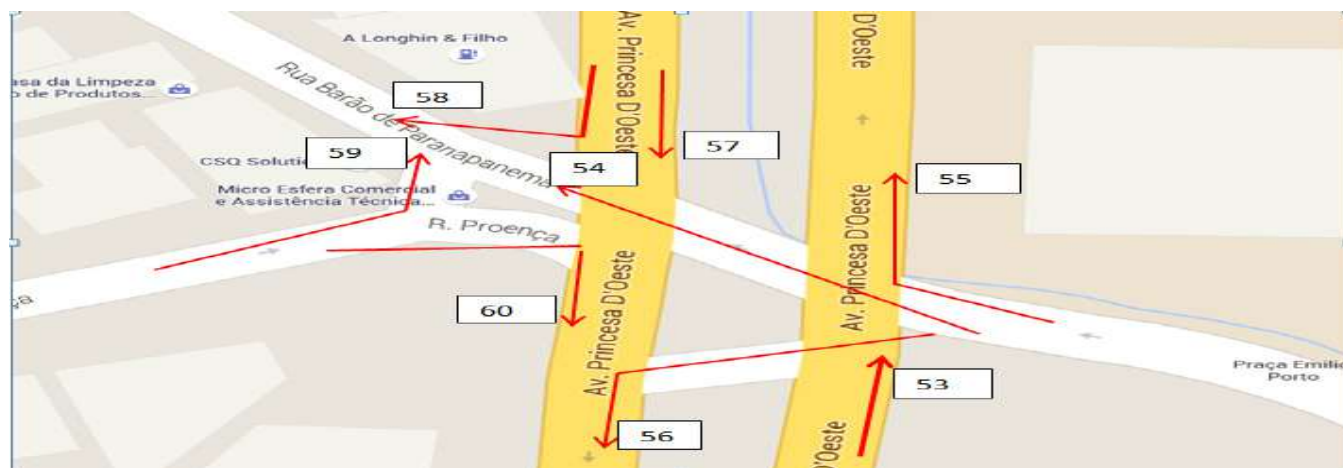
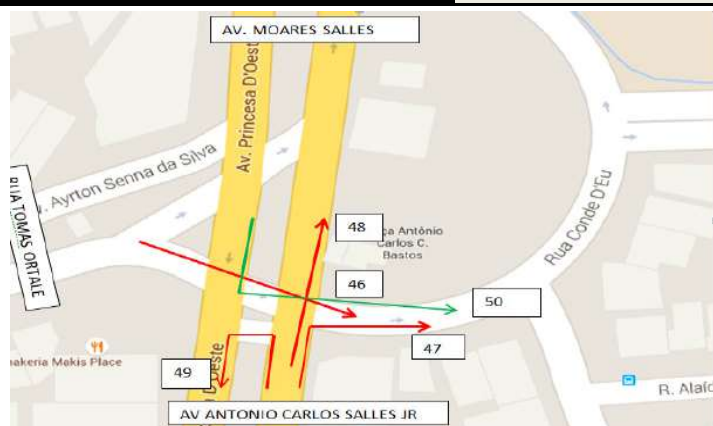
VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | FEIRA, 24 DE FEVEREIR | | | | | | | |
|-----------|-----------------------|-------|-----|------|----------------|-------|--------|-------|
| | 13:00 as 14:00 | | | | 00:00 as 01:00 | | | |
| | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | |
| M 31 | Almoço | 9 | 0 | 0 | 1 | 0 | 10 | 10 |
| M 31 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 32 | Almoço | 307 | 4 | 2 | 24 | 0 | 337 | 331 |
| M 32 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 33 | Almoço | 85 | 0 | 3 | 2 | 0 | 90 | 92 |
| M 33 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 34 | Almoço | 7 | 0 | 0 | 0 | 0 | 7 | 7 |
| M 34 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 35 | Almoço | 2 | 0 | 1 | 4 | 0 | 7 | 6 |
| M 35 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 36 | Almoço | 46 | 0 | 0 | 2 | 0 | 48 | 47 |
| M 36 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 37 | Almoço | 54 | 0 | 0 | 3 | 0 | 57 | 56 |
| M 37 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 38 | Almoço | 29 | 0 | 0 | 0 | 0 | 29 | 29 |
| M 38 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 39 | Almoço | 163 | 0 | 3 | 8 | 0 | 174 | 173 |
| M 39 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 40 | Almoço | 305 | 8 | 10 | 30 | 0 | 353 | 356 |
| M 40 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 41 | Almoço | 11 | 0 | 2 | 1 | 0 | 14 | 16 |
| M 41 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 42 | Almoço | 7 | 0 | 1 | 0 | 0 | 8 | 9 |
| M 42 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 43 | Almoço | 1.130 | 12 | 16 | 83 | 0 | 1.241 | 1.228 |
| M 43 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 44 | Almoço | 70 | 0 | 0 | 2 | 0 | 72 | 71 |
| M 44 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 45 | Almoço | 78 | 0 | 1 | 5 | 0 | 84 | 83 |
| M 45 | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| % Veículos Comerciais | | FATOR HORA PICO |
|-----------------------|-------|-----------------|
| Onib.+ Cam. | Cam. | PICO |
| 0,0% | 0,0% | 0,63 |
| 0,0% | 0,0% | |
| 1,8% | 0,6% | 0,89 |
| 0,0% | 0,0% | |
| 3,3% | 3,3% | 0,78 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,58 |
| 0,0% | 0,0% | |
| 14,3% | 14,3% | 0,44 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,71 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,75 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,52 |
| 0,0% | 0,0% | |
| 1,7% | 1,7% | 0,91 |
| 0,0% | 0,0% | |
| 5,1% | 2,8% | 0,90 |
| 0,0% | 0,0% | |
| 14,3% | 14,3% | 0,58 |
| 0,0% | 0,0% | |
| 12,5% | 12,5% | 0,29 |
| 0,0% | 0,0% | |
| 2,3% | 1,3% | 0,90 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,78 |
| 0,0% | 0,0% | |
| 1,2% | 1,2% | 0,81 |
| 0,0% | 0,0% | |

| Pedestre | | |
|----------|-------------|---|
| HP | Total Cont. | |
| P1 | 0 | 0 |
| P2 | 0 | 0 |
| P3 | 0 | 0 |
| P4 | 0 | 0 |
| P5 | 0 | 0 |
| P6 | 0 | 0 |
| P7 | 0 | 0 |
| P8 | 0 | 0 |
| P9 | 0 | 0 |

CONTAGEM VEÍCULAR CLASSIFICADA



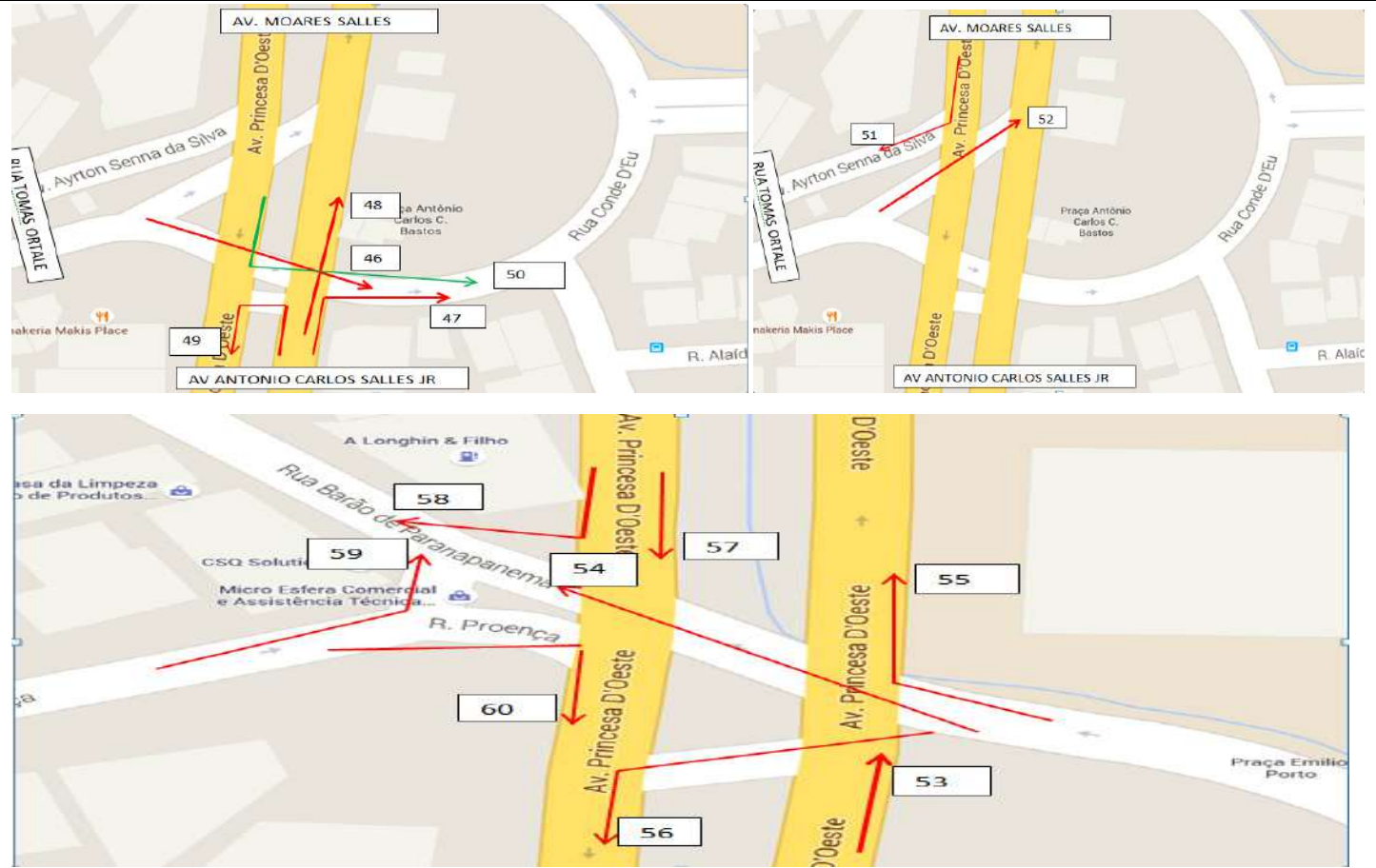
VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | | QUARTA FEIRA 24 DE FEVEREIRO DE 20016 | | | | | | |
|-----------|-------|---------------------------------------|------|-----|------|-------|-------|--------|
| | | QUARTA FEIRA 24 DE FEVEREIRO DE 20016 | | | | | | |
| | | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. |
| M 46 | Manhã | 437 | 4 | 6 | 28 | 0 | 475 | 471 |
| | Tarde | 403 | 3 | 0 | 27 | 0 | 433 | 423 |
| M 47 | Manhã | 210 | 6 | 1 | 4 | 0 | 221 | 226 |
| | Tarde | 175 | 0 | 0 | 8 | 0 | 183 | 179 |
| M 48 | Manhã | 792 | 10 | 6 | 61 | 0 | 869 | 855 |
| | Tarde | 765 | 4 | 5 | 32 | 0 | 806 | 799 |
| M 49 | Manhã | 33 | 0 | 0 | 2 | 0 | 35 | 34 |
| | Tarde | 51 | 0 | 0 | 2 | 0 | 53 | 52 |
| M 50 | Manhã | 298 | 8 | 3 | 11 | 0 | 320 | 326 |
| | Tarde | 480 | 8 | 1 | 14 | 0 | 503 | 505 |
| M 51 | Manhã | 599 | 6 | 1 | 45 | 0 | 651 | 636 |
| | Tarde | 807 | 4 | 9 | 39 | 0 | 859 | 853 |
| M 52 | Manhã | 554 | 7 | 8 | 35 | 0 | 604 | 602 |
| | Tarde | 380 | 2 | 4 | 25 | 0 | 411 | 405 |
| M 53 | Manhã | 1.412 | 17 | 15 | 96 | 0 | 1.540 | 1.524 |
| | Tarde | 1.245 | 6 | 11 | 58 | 0 | 1.320 | 1.308 |
| M 54 | Manhã | 397 | 8 | 6 | 32 | 0 | 443 | 441 |
| | Tarde | 340 | 8 | 3 | 33 | 0 | 384 | 379 |
| M 55 | Manhã | 260 | 2 | 3 | 43 | 0 | 308 | 292 |
| | Tarde | 203 | 1 | 3 | 28 | 0 | 235 | 225 |
| M 56 | Manhã | 434 | 0 | 7 | 17 | 0 | 458 | 457 |
| | Tarde | 542 | 4 | 1 | 18 | 0 | 565 | 561 |
| M 57 | Manhã | 1088 | 22 | 7 | 77 | 0 | 1.194 | 1.185 |
| | Tarde | 1782 | 10 | 9 | 96 | 0 | 1.897 | 1.868 |
| M 58 | Manhã | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| | Tarde | 6 | 0 | 0 | 1 | 0 | 7 | 7 |
| M 59 | Manhã | 84 | 0 | 1 | 8 | 0 | 93 | 90 |
| | Tarde | 71 | 0 | 0 | 5 | 0 | 76 | 74 |
| M 60 | Manhã | 172 | 1 | 0 | 10 | 0 | 183 | 179 |
| | Tarde | 279 | 7 | 3 | 7 | 0 | 296 | 303 |

| % Veículos Comerciais | | FATOR HORA PICO |
|-----------------------|------|-----------------|
| Onib.+ Cam. | Cam. | |
| 2,1% | 1,3% | 0,65 |
| 0,7% | 0,0% | 0,78 |
| 3,2% | 0,5% | 0,78 |
| 0,0% | 0,0% | 0,78 |
| 1,8% | 0,7% | 0,91 |
| 1,1% | 0,6% | 0,88 |
| 0,0% | 0,0% | 0,67 |
| 0,0% | 0,0% | 0,55 |
| 3,4% | 0,9% | 0,86 |
| 1,8% | 0,2% | 0,76 |
| 1,1% | 0,2% | 0,81 |
| 1,5% | 1,0% | 0,89 |
| 2,5% | 1,3% | 0,88 |
| 1,5% | 1,0% | 0,93 |
| 2,1% | 1,0% | 0,92 |
| 1,3% | 0,8% | 0,86 |
| 3,2% | 1,4% | 0,84 |
| 2,9% | 0,8% | 0,88 |
| 1,6% | 1,0% | 0,91 |
| 1,7% | 1,3% | 0,82 |
| 1,5% | 1,5% | 0,88 |
| 0,9% | 0,2% | 0,85 |
| 2,4% | 0,6% | 0,84 |
| 1,0% | 0,5% | 0,87 |
| 0,0% | 0,0% | 0,50 |
| 0,0% | 0,0% | 0,44 |
| 1,1% | 1,1% | 0,63 |
| 0,0% | 0,0% | 0,56 |
| 0,5% | 0,0% | 0,76 |
| 3,4% | 1,0% | 0,96 |

| Pedestre | | |
|----------|-------------|---|
| HP | Total Cont. | |
| P1 | 0 | 0 |
| P2 | 0 | 0 |
| P3 | 0 | 0 |
| P4 | 0 | 0 |
| P5 | 0 | 0 |
| P6 | 0 | 0 |
| P7 | 0 | 0 |
| P8 | 0 | 0 |
| P9 | 0 | 0 |

CONTAGEM VEÍCULAR CLASSIFICADA



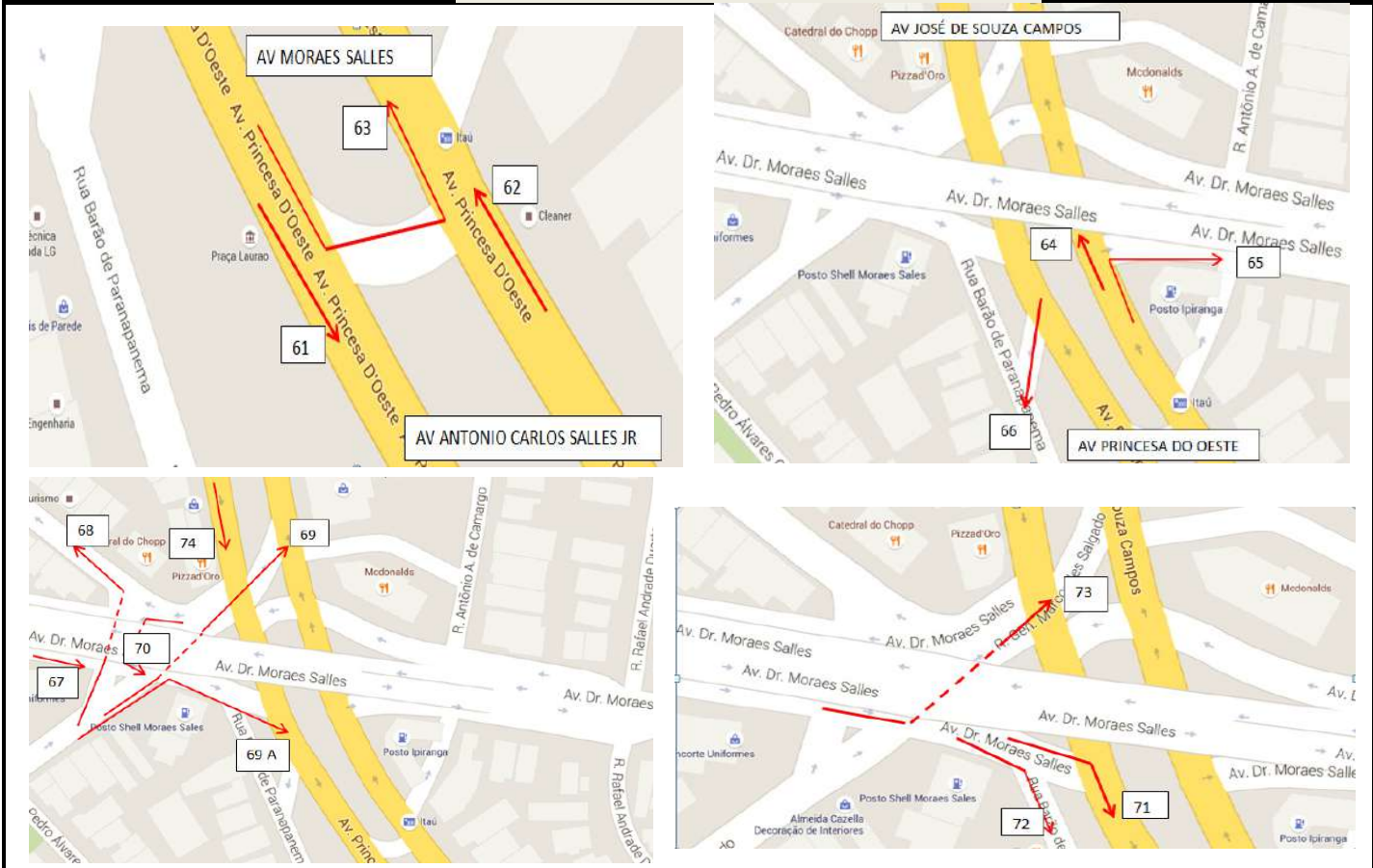
VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | FEIRA, 24 DE FEVEREIR | | | | 13:00 as 14:00 | | 13:00 as 14:00 | |
|-----------|-----------------------|------|-----|------|----------------|-------|----------------|--------|
| | FEIRA, 24 DE FEVEREIR | | | | 00:00 as 01:00 | | 00:00 as 01:00 | |
| | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | EQUIV. |
| M 46 | Almoço | 318 | 3 | 6 | 37 | 0 | 364 | 355 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 47 | Almoço | 169 | 1 | 0 | 8 | 0 | 178 | 175 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 48 | Almoço | 564 | 5 | 11 | 45 | 0 | 625 | 619 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 49 | Almoço | 39 | 0 | 0 | 2 | 0 | 41 | 40 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 50 | Almoço | 264 | 5 | 4 | 34 | 0 | 307 | 299 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 51 | Almoço | 614 | 3 | 13 | 58 | 0 | 688 | 675 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 52 | Almoço | 336 | 3 | 10 | 33 | 0 | 382 | 379 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 53 | Almoço | 978 | 8 | 22 | 83 | 0 | 1.091 | 1.080 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 54 | Almoço | 234 | 3 | 8 | 28 | 0 | 273 | 270 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 55 | Almoço | 214 | 4 | 4 | 25 | 0 | 247 | 243 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 56 | Almoço | 398 | 0 | 3 | 14 | 0 | 415 | 411 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 57 | Almoço | 1191 | 11 | 21 | 111 | 0 | 1.334 | 1.311 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 58 | Almoço | 9 | 0 | 0 | 0 | 0 | 9 | 9 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 59 | Almoço | 46 | 0 | 1 | 5 | 0 | 52 | 51 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 60 | Almoço | 155 | 4 | 5 | 16 | 0 | 180 | 181 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| % Veículos Comerciais | | FATOR HORA |
|-----------------------|------|------------|
| Onib.+ Cam. | Cam. | PICO |
| 2,5% | 1,6% | 0,93 |
| 0,0% | 0,0% | |
| 0,6% | 0,0% | 0,71 |
| 0,0% | 0,0% | |
| 2,6% | 1,8% | 0,87 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,79 |
| 0,0% | 0,0% | |
| 2,9% | 1,3% | 0,94 |
| 0,0% | 0,0% | |
| 2,3% | 1,9% | 0,88 |
| 0,0% | 0,0% | |
| 3,4% | 2,6% | 0,94 |
| 0,0% | 0,0% | |
| 2,7% | 2,0% | 0,88 |
| 0,0% | 0,0% | |
| 4,0% | 2,9% | 0,91 |
| 0,0% | 0,0% | |
| 3,2% | 1,6% | 0,94 |
| 0,0% | 0,0% | |
| 0,7% | 0,7% | 0,97 |
| 0,0% | 0,0% | |
| 2,4% | 1,6% | 0,91 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,45 |
| 0,0% | 0,0% | |
| 1,9% | 1,9% | 0,68 |
| 0,0% | 0,0% | |
| 5,0% | 2,8% | 0,66 |
| 0,0% | 0,0% | |

| Pedestre | | |
|----------|-------------|---|
| HP | Total Cont. | |
| | 0 | 0 |
| P1 | 0 | 0 |
| | 0 | 0 |
| P2 | 0 | 0 |
| | 0 | 0 |
| P3 | 0 | 0 |
| | 0 | 0 |
| P4 | 0 | 0 |
| | 0 | 0 |
| P5 | 0 | 0 |
| | 0 | 0 |
| P6 | 0 | 0 |
| | 0 | 0 |
| P7 | 0 | 0 |
| | 0 | 0 |
| P8 | 0 | 0 |
| | 0 | 0 |
| P9 | 0 | 0 |

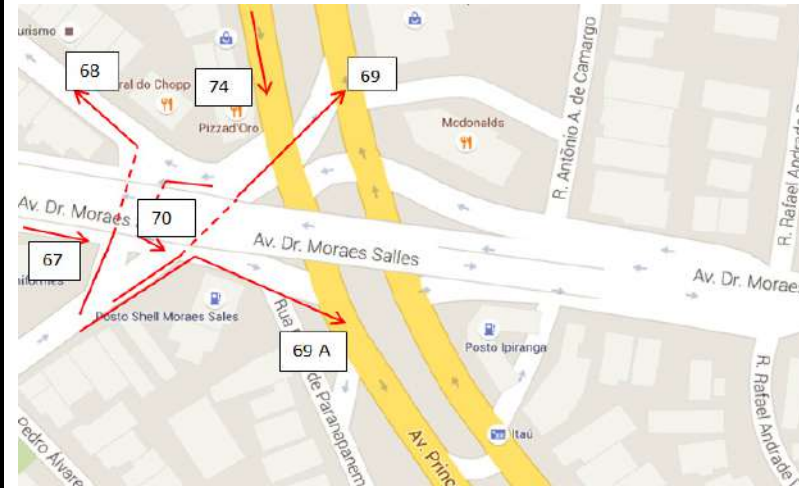
CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | | QUINTA FEIRA, 25 DE FEVEREIRO DE 2016 | | | | | | % | | | Pedestre | | | |
|-----------|-------|---------------------------------------|------|-----|------|-------|-------|--------|-------------|------|-----------------|----|-------------|---|
| | | QUINTA FEIRA, 25 DE FEVEREIRO DE 2016 | | | | | | % | | | Pedestre | | | |
| | | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | Onib.+ Cam. | Cam. | FATOR HORA PICO | HP | Total Cont. | |
| M 61 | Manhã | 1201 | 7 | 22 | 101 | 0 | 1.331 | 1.310 | 2,2% | 1,7% | 0,83 | P1 | 0 | 0 |
| | Tarde | 1831 | 19 | 14 | 201 | 0 | 2.065 | 1.998 | 1,6% | 0,7% | 0,94 | | 0 | 0 |
| M 62 | Manhã | 1598 | 19 | 18 | 158 | 0 | 1.793 | 1.751 | 2,1% | 1,0% | 0,78 | P2 | 0 | 0 |
| | Tarde | 1802 | 8 | 9 | 96 | 0 | 1.915 | 1.884 | 0,9% | 0,5% | 0,82 | | 0 | 0 |
| M 63 | Manhã | 881 | 16 | 20 | 95 | 0 | 1.012 | 1.001 | 3,6% | 2,0% | 0,85 | P3 | 0 | 0 |
| | Tarde | 1586 | 10 | 6 | 51 | 0 | 1.653 | 1.644 | 1,0% | 0,4% | 0,90 | | 0 | 0 |
| M 64 | Manhã | 1.625 | 25 | 16 | 170 | 0 | 1.836 | 1.792 | 2,2% | 0,9% | 0,83 | P4 | 0 | 0 |
| | Tarde | 2.228 | 7 | 9 | 76 | 0 | 2.320 | 2.298 | 0,7% | 0,4% | 0,94 | | 0 | 0 |
| M 65 | Manhã | 854 | 10 | 22 | 83 | 0 | 969 | 960 | 3,3% | 2,3% | 0,60 | P5 | 0 | 0 |
| | Tarde | 1160 | 11 | 6 | 71 | 0 | 1.248 | 1.230 | 1,4% | 0,5% | 0,77 | | 0 | 0 |
| M 66 | Manhã | 212 | 0 | 0 | 4 | 0 | 216 | 214 | 0,0% | 0,0% | 0,24 | P6 | 0 | 0 |
| | Tarde | 632 | 1 | 2 | 18 | 0 | 653 | 647 | 0,5% | 0,3% | 0,82 | | 0 | 0 |
| M 67 | Manhã | 352 | 4 | 8 | 16 | 0 | 380 | 384 | 3,2% | 2,1% | 0,91 | P7 | 0 | 0 |
| | Tarde | 442 | 2 | 3 | 41 | 0 | 488 | 473 | 1,0% | 0,6% | 0,90 | | 0 | 0 |
| M 68 | Manhã | 654 | 0 | 2 | 67 | 0 | 723 | 692 | 0,3% | 0,3% | 0,66 | P8 | 0 | 0 |
| | Tarde | 645 | 1 | 3 | 27 | 0 | 676 | 667 | 0,6% | 0,4% | 0,89 | | 0 | 0 |
| M 69 | Manhã | 1200 | 4 | 20 | 254 | 0 | 1.478 | 1.375 | 1,6% | 1,4% | 0,92 | P9 | 0 | 0 |
| | Tarde | 912 | 4 | 10 | 113 | 0 | 1.039 | 997 | 1,3% | 1,0% | 0,89 | | 0 | 0 |
| M 69A | Manhã | 606 | 13 | 20 | 105 | 0 | 744 | 725 | 4,4% | 2,7% | 0,89 | | | |
| | Tarde | 671 | 9 | 6 | 62 | 0 | 748 | 732 | 2,0% | 0,8% | 0,95 | | | |
| M 70 | Manhã | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0,0% | 0,0% | 0,25 | | | |
| | Tarde | 6 | 0 | 0 | 1 | 0 | 7 | 7 | 0,0% | 0,0% | 0,44 | | | |
| M 71 | Manhã | 562 | 8 | 12 | 86 | 0 | 668 | 645 | 3,0% | 1,8% | 0,87 | | | |
| | Tarde | 603 | 9 | 5 | 67 | 0 | 684 | 665 | 2,0% | 0,7% | 0,89 | | | |
| M 72 | Manhã | 32 | 0 | 0 | 2 | 0 | 34 | 33 | 0,0% | 0,0% | 0,53 | | | |
| | Tarde | 39 | 0 | 0 | 3 | 0 | 42 | 41 | 0,0% | 0,0% | 0,55 | | | |
| M 73 | Manhã | 159 | 3 | 3 | 15 | 0 | 180 | 179 | 3,3% | 1,7% | 0,79 | | | |
| | Tarde | 135 | 1 | 0 | 13 | 0 | 149 | 144 | 0,7% | 0,0% | 0,29 | | | |

CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | EIRA, 25 DE FEVEREIRO | | | | | | | |
|-----------|-----------------------|-------|-----|------|----------------|-------|--------|-------|
| | 13:00 as 14:00 | | | | 00:00 as 01:00 | | | |
| | AUTO | ONIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | |
| M 61 | Almoço | 1241 | 12 | 35 | 120 | 0 | 1.408 | 1.395 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 62 | Almoço | 1448 | 6 | 30 | 119 | 0 | 1.603 | 1.580 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 63 | Almoço | 1055 | 4 | 17 | 83 | 0 | 1.159 | 1.139 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 64 | Almoço | 1.170 | 6 | 18 | 139 | 0 | 1.333 | 1.288 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 65 | Almoço | 1333 | 4 | 29 | 63 | 0 | 1.429 | 1.431 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 66 | Almoço | 255 | 1 | 8 | 18 | 0 | 282 | 282 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 67 | Almoço | 409 | 0 | 7 | 36 | 0 | 452 | 441 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 68 | Almoço | 529 | 0 | 7 | 38 | 0 | 574 | 562 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 69 | Almoço | 860 | 2 | 24 | 89 | 0 | 975 | 957 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 69A | Almoço | 549 | 7 | 20 | 51 | 0 | 627 | 629 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 70 | Almoço | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 71 | Almoço | 550 | 3 | 21 | 49 | 0 | 623 | 623 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 72 | Almoço | 31 | 0 | 0 | 5 | 0 | 36 | 34 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 73 | Almoço | 186 | 0 | 1 | 18 | 0 | 205 | 197 |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| % Veículos Comerciais | | FATOR HORA PICO |
|-----------------------|------|-----------------|
| Onib.+ Cam. | Cam. | |
| 3,3% | 2,5% | 0,95 |
| 0,0% | 0,0% | |
| 2,2% | 1,9% | 0,95 |
| 0,0% | 0,0% | |
| 1,8% | 1,5% | 0,92 |
| 0,0% | 0,0% | |
| 1,8% | 1,4% | 0,89 |
| 0,0% | 0,0% | |
| 2,3% | 2,0% | 0,79 |
| 0,0% | 0,0% | |
| 3,2% | 2,8% | 0,77 |
| 0,0% | 0,0% | |
| 1,5% | 1,5% | 0,91 |
| 0,0% | 0,0% | |
| 1,2% | 1,2% | 0,95 |
| 0,0% | 0,0% | |
| 2,7% | 2,5% | 0,91 |
| 0,0% | 0,0% | |
| 4,3% | 3,2% | 0,94 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,33 |
| 0,0% | 0,0% | |
| 3,9% | 3,4% | 0,92 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | 0,75 |
| 0,0% | 0,0% | |
| 0,5% | 0,5% | 0,55 |
| 0,0% | 0,0% | |

| Pedestre | |
|----------|-------------|
| HP | Total Cont. |
| P1 | 0 |
| P2 | 0 |
| P3 | 0 |
| P4 | 0 |
| P5 | 0 |
| P6 | 0 |
| P7 | 0 |
| P8 | 0 |
| P9 | 0 |

CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | EIRA, 25 DE FEVEREIRO | | | | | | | |
|-----------|-----------------------|------|-----|------|----------------|-------|--------|-------|
| | 07:15 as 08:15 | | | | 17:15 as 18:15 | | | |
| | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | |
| M 74 | Manhã | 1421 | 47 | 46 | 115 | 0 | 1.629 | 1.665 |
| | Tarde | 1892 | 40 | 12 | 154 | 0 | 2.098 | 2.073 |
| M 75 | Manhã | 47 | 0 | 0 | 2 | 0 | 49 | 48 |
| | Tarde | 105 | 1 | 1 | 15 | 0 | 122 | 117 |
| M 76 | Manhã | 422 | 5 | 2 | 15 | 0 | 444 | 444 |
| | Tarde | 213 | 2 | 0 | 15 | 0 | 230 | 225 |
| M 77 | Manhã | 1916 | 37 | 34 | 138 | 0 | 2.125 | 2.127 |
| | Tarde | 1633 | 51 | 25 | 170 | 0 | 1.879 | 1.870 |
| M 78 | Manhã | 349 | 2 | 4 | 21 | 0 | 376 | 372 |
| | Tarde | 458 | 2 | 2 | 17 | 0 | 479 | 475 |
| M 79 | Manhã | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| | Tarde | 7 | 0 | 0 | 2 | 0 | 9 | 8 |
| M 80 | Manhã | 10 | 0 | 0 | 2 | 0 | 12 | 11 |
| | Tarde | 105 | 0 | 0 | 5 | 0 | 110 | 108 |
| M 81 | Manhã | 25 | 1 | 1 | 0 | 0 | 27 | 29 |
| | Tarde | 64 | 1 | 0 | 5 | 0 | 70 | 69 |
| M 82 | Manhã | 247 | 1 | 2 | 13 | 0 | 263 | 260 |
| | Tarde | 306 | 2 | 2 | 18 | 0 | 328 | 323 |
| M 83 | Manhã | 112 | 1 | 2 | 10 | 0 | 125 | 123 |
| | Tarde | 257 | 0 | 0 | 4 | 0 | 261 | 259 |
| M 84 | Manhã | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tarde | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 85 | Manhã | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tarde | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 86 | Manhã | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tarde | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 87 | Manhã | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tarde | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M 88 | Manhã | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tarde | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| % Veículos Comerciais | | FATOR HORA PICO |
|-----------------------|------|-----------------|
| Onib.+ Cam. | Cam. | |
| 5,7% | 2,8% | 0,96 |
| 2,5% | 0,6% | 0,93 |
| 0,0% | 0,0% | 0,68 |
| 1,6% | 0,8% | 0,69 |
| 1,6% | 0,5% | 0,90 |
| 0,9% | 0,0% | 0,88 |
| 3,3% | 1,6% | 0,91 |
| 4,0% | 1,3% | 0,90 |
| 1,6% | 1,1% | 0,79 |
| 0,8% | 0,4% | 0,88 |
| 0,0% | 0,0% | 0,25 |
| 0,0% | 0,0% | 0,04 |
| 0,0% | 0,0% | 0,23 |
| 0,0% | 0,0% | 0,79 |
| 7,4% | 3,7% | 0,38 |
| 1,4% | 0,0% | 0,67 |
| 1,1% | 0,8% | 0,76 |
| 1,2% | 0,6% | 0,93 |
| 2,4% | 1,6% | 0,65 |
| 0,0% | 0,0% | 0,84 |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |
| 0,0% | 0,0% | |

| Pedestre | | |
|----------|-------------|---|
| HP | Total Cont. | |
| P1 | 0 | 0 |
| P2 | 0 | 0 |
| P3 | 0 | 0 |
| P4 | 0 | 0 |
| P5 | 0 | 0 |
| P6 | 0 | 0 |
| P7 | 0 | 0 |
| P8 | 0 | 0 |
| P9 | 0 | 0 |

CONTAGEM VEÍCULAR CLASSIFICADA



VOLUME HORA PICO (MANHÃ E TARDE)

| DATA/HORA | | EIRA, 25 DE FEVEREIRO | | | | | | | |
|-----------|--------|-----------------------|------|-----|------|----------------|-------|--------|--------|
| | | 13:00 as 14:00 | | | | 00:00 as 01:00 | | | |
| | | AUTO | ÔNIB | CAM | MOTO | BICIC | SIMPL | EQUIV. | EQUIV. |
| M 74 | Almoço | 1516 | 23 | 30 | 126 | 0 | 1.695 | 1.685 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 75 | Almoço | 39 | 1 | 2 | 6 | 0 | 48 | 48 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 76 | Almoço | 229 | 1 | 2 | 11 | 0 | 243 | 241 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 77 | Almoço | 1637 | 25 | 31 | 101 | 0 | 1.794 | 1.800 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 78 | Almoço | 334 | 2 | 11 | 20 | 0 | 367 | 370 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 79 | Almoço | 23 | 0 | 0 | 2 | 0 | 25 | 24 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 80 | Almoço | 121 | 0 | 3 | 2 | 0 | 126 | 128 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 81 | Almoço | 46 | 0 | 1 | 5 | 0 | 52 | 51 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 82 | Almoço | 252 | 2 | 4 | 14 | 0 | 272 | 271 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 83 | Almoço | 203 | 0 | 10 | 8 | 0 | 221 | 227 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 84 | Almoço | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 85 | Almoço | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 86 | Almoço | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 87 | Almoço | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M 88 | Almoço | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Janta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| % Veículos Comerciais | | | FATOR HORA PICO |
|-----------------------|------|--|-----------------|
| Onib.+ Cam. | Cam. | | |
| 3,1% | 1,8% | | 0,46 |
| 0,0% | 0,0% | | |
| 6,3% | 4,2% | | 0,67 |
| 0,0% | 0,0% | | |
| 1,2% | 0,8% | | 0,83 |
| 0,0% | 0,0% | | |
| 3,1% | 1,7% | | 0,92 |
| 0,0% | 0,0% | | |
| 3,5% | 3,0% | | 0,92 |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | 0,52 |
| 0,0% | 0,0% | | |
| 2,4% | 2,4% | | 0,83 |
| 0,0% | 0,0% | | |
| 1,9% | 1,9% | | 0,81 |
| 0,0% | 0,0% | | |
| 2,2% | 1,5% | | 0,79 |
| 0,0% | 0,0% | | |
| 4,5% | 4,5% | | 0,86 |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |
| 0,0% | 0,0% | | |

| Pedestre | | |
|----------|-------------|---|
| HP | Total Cont. | |
| P1 | 0 | 0 |
| P2 | 0 | 0 |
| P3 | 0 | 0 |
| P4 | 0 | 0 |
| P5 | 0 | 0 |
| P6 | 0 | 0 |
| P7 | 0 | 0 |
| P8 | 0 | 0 |
| P9 | 0 | 0 |



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

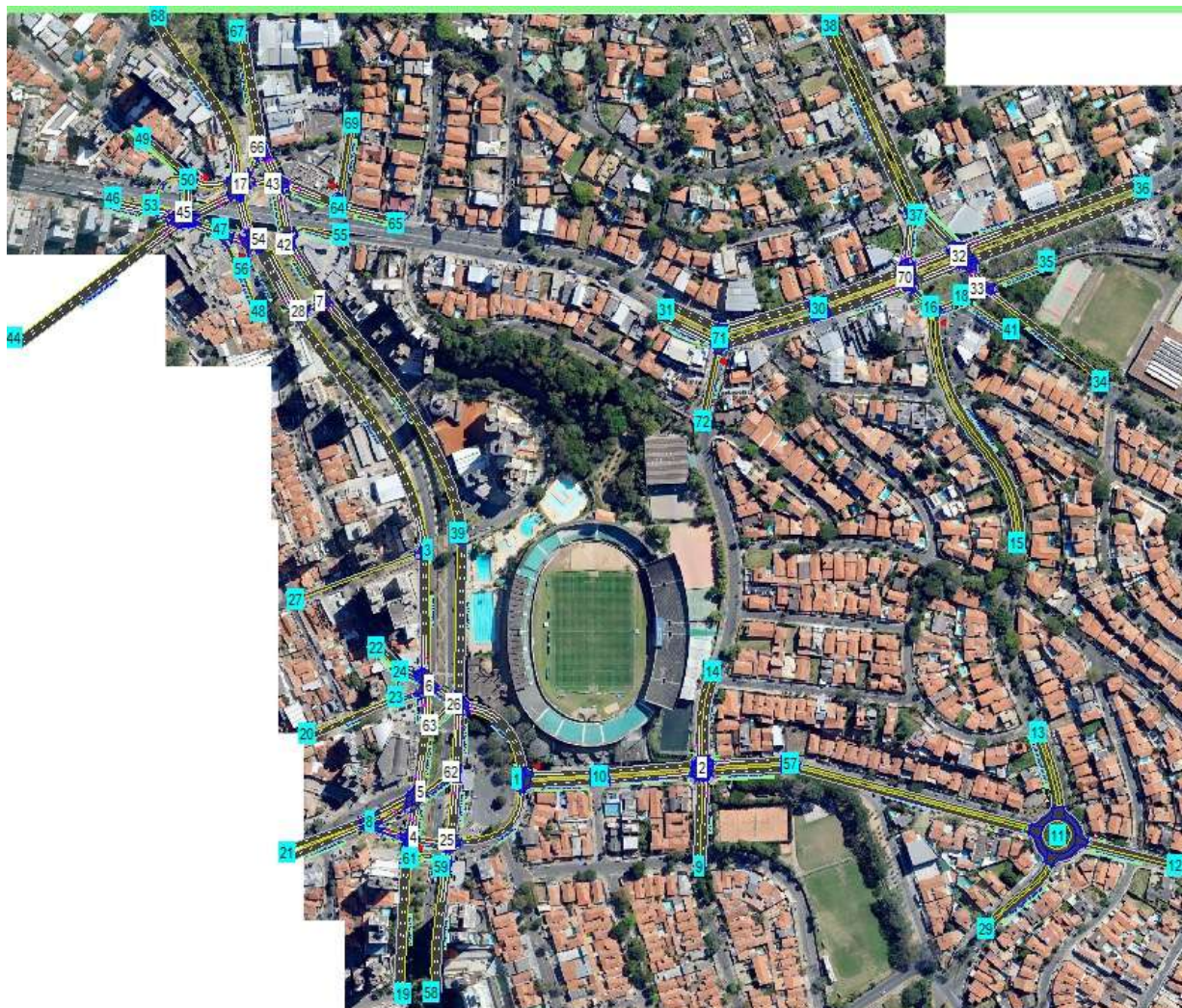
ANEXO 3 – PLANILHAS DE SIMULAÇÃO DE TRÁFEGO



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

LOCALIZAÇÃO DOS NÓS



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.959 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2787 | 3394 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2787 | 3394 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 536 | 929 | 354 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 536 | 1283 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.5% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016






| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.978 | | | 0.923 | |
| Flt Protected | | 0.979 | | | 0.988 | | | 0.991 | | | 0.994 | |
| Satd. Flow (prot) | 0 | 3289 | 0 | 0 | 3355 | 0 | 0 | 3298 | 0 | 0 | 3163 | 0 |
| Flt Permitted | | 0.979 | | | 0.988 | | | 0.863 | | | 0.887 | |
| Satd. Flow (perm) | 0 | 3289 | 0 | 0 | 3355 | 0 | 0 | 2872 | 0 | 0 | 2823 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 99.0 | | | 99.0 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 7.1 | | | 7.1 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.42 | 0.66 | 0.84 | 0.69 | 0.81 | 0.81 | 0.61 | 0.40 | 0.70 | 0.76 |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 466 | 565 | 48 | 168 | 489 | 17 | 36 | 127 | 28 | 20 | 56 | 80 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1079 | 0 | 0 | 674 | 0 | 0 | 191 | 0 | 0 | 156 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 19.0 | 19.0 | 0.0 | 23.0 | 23.0 | 0.0 | 13.0 | 13.0 | 0.0 | 13.0 | 13.0 | 0.0 |
| Total Split (%) | 34.5% | 34.5% | 0.0% | 41.8% | 41.8% | 0.0% | 23.6% | 23.6% | 0.0% | 23.6% | 23.6% | 0.0% |
| Maximum Green (s) | 13.0 | 13.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 4.0 | 6.0 | 6.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 13.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.24 | | | 0.31 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 1.39 | | | 0.65 | | | 0.46 | | | 0.38 | |
| Control Delay | | 206.0 | | | 20.0 | | | 25.5 | | | 24.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 206.0 | | | 20.0 | | | 25.5 | | | 24.3 | |
| LOS | | F | | | B | | | C | | | C | |
| Approach Delay | | 206.0 | | | 20.0 | | | 25.5 | | | 24.3 | |
| Approach LOS | | F | | | B | | | C | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 55
 Offset: 45 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.39
 Intersection Signal Delay: 116.4 Intersection LOS: F
 Intersection Capacity Utilization 64.2% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| | | |
|---|---|---|
|  13 s |  23 s |  19 s |
|  13 s | | |

Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.986 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4914 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4914 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1292 | 132 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1424 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Flt | | 0.973 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.983 | |
| Satd. Flow (prot) | 0 | 3352 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4982 | 0 |
| Flt Permitted | | | | | | | | | | | 0.983 | |
| Satd. Flow (perm) | 0 | 3352 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4982 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 0.65 | 0.48 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.86 | 0.91 | 0.92 |
| Growth Factor | 100% | 100% | 300% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 725 | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 458 | 869 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 881 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1327 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | 0.0 | 28.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.0 | 42.0 | 0.0 |
| Total Split (%) | 0.0% | 40.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 60.0% | 60.0% | 0.0% |
| Maximum Green (s) | | 21.0 | | | | | | | | 37.0 | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.88 | | | | | | | | | 0.50 | |
| Control Delay | | 35.1 | | | | | | | | | 2.4 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.8 | |
| Total Delay | | 35.1 | | | | | | | | | 3.2 | |
| LOS | | D | | | | | | | | | A | |
| Approach Delay | | 35.1 | | | | | | | | | 3.2 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | D | | | | | | | | | A | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.88 |
| Intersection Signal Delay: | 15.9 |
| Intersection Capacity Utilization | 48.7% |
| Analysis Period (min) | 15 |
| Intersection LOS: | B |
| ICU Level of Service | A |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.942 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4809 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4809 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.81 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 684 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1247 | 785 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 684 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2032 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 0.0 | 28.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.0 | 0.0 |
| Total Split (%) | 0.0% | 40.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 60.0% | 0.0% |
| Maximum Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.66 | | | | | | | | | 0.91dr | |
| Control Delay | | 25.2 | | | | | | | | | 16.5 | |
| Queue Delay | | 0.0 | | | | | | | | | 133.1 | |
| Total Delay | | 25.2 | | | | | | | | | 149.6 | |
| LOS | | C | | | | | | | | | F | |
| Approach Delay | | 25.2 | | | | | | | | | 149.6 | |
| Approach LOS | | C | | | | | | | | | F | |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 58 (83%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 118.3 Intersection LOS: F
 Intersection Capacity Utilization 63.8% ICU Level of Service B
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



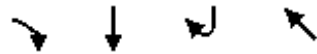
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 179 | 1185 | 4 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1644 | 5081 | 0 | 3505 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1644 | 5081 | 0 | 3505 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.76 | 0.84 | 0.50 | 0.84 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 236 | 1411 | 8 | 525 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 236 | 1419 | 0 | 525 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | 0.0 | 35.0 | 0.0 | 37.0 |
| Total Split (%) | 0.0% | 48.6% | 0.0% | 51.4% |
| Maximum Green (s) | | 30.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 72.0 | 30.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.42 | | 0.44 |
| v/c Ratio | 0.14 | 0.67 | | 0.34 |
| Control Delay | 0.2 | 18.9 | | 13.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.2 | 18.9 | | 13.8 |
| LOS | A | B | | B |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

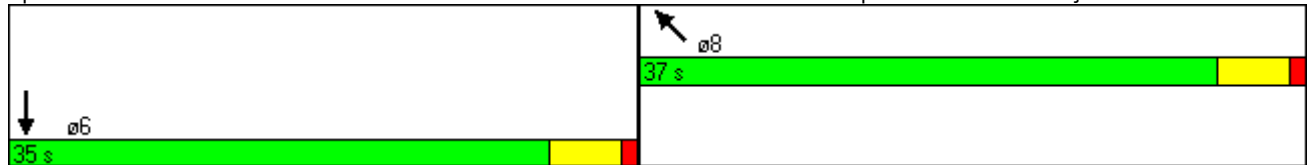


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------|------|------|------|------|
| Approach Delay | | 18.9 | | 13.8 |
| Approach LOS | | B | | B |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 72 |
| Actuated Cycle Length: | 72 |
| Offset: | 58 (81%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 15.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 43.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|--------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3367 | 0 | 0 | 0 | 0 | 3538 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3367 | 0 | 0 | 0 | 0 | 3538 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.71 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1410 | 0 | 0 | 0 | 0 | 1883 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1410 | 0 | 0 | 0 | 0 | 1883 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 64.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40.0 |
| Total Split (%) | 61.5% | 0.0% | 0.0% | 0.0% | 0.0% | 38.5% |
| Maximum Green (s) | 58.0 | | | | | 34.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 58.0 | | | | | 34.0 |
| Actuated g/C Ratio | 0.56 | | | | | 0.33 |
| v/c Ratio | 0.75 | | | | | 1.63 |
| Control Delay | 18.7 | | | | | 313.8 |
| Queue Delay | 64.3 | | | | | 26.2 |
| Total Delay | 83.0 | | | | | 340.0 |
| LOS | F | | | | | F |
| Approach Delay | 83.0 | | | | | |
| Approach LOS | F | | | | | |

Intersection Summary

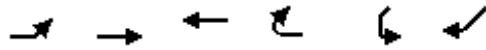
Area Type: Other
Cycle Length: 104
Actuated Cycle Length: 104
Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
Natural Cycle: 130
Control Type: Pretimed
Maximum v/c Ratio: 1.63
Intersection Signal Delay: 229.9 Intersection LOS: F
Intersection Capacity Utilization 79.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1717 | 1807 | 0 | 0 | 0 | 2814 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1717 | 1807 | 0 | 0 | 0 | 2814 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.88 | 0.65 | 0.92 | 0.92 | 0.92 | 0.81 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 684 | 840 | 0 | 0 | 0 | 785 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 684 | 840 | 0 | 0 | 0 | 785 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | | | 0.980 | | | 0.943 | | | 0.933 | |
| Flt Protected | | 0.978 | | | 0.987 | | | 0.999 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 1756 | 0 | 0 | 1766 | 0 | 0 | 1798 | 0 | 0 | 1747 | 0 |
| Flt Permitted | | 0.978 | | | 0.987 | | | 0.999 | | | 0.996 | |
| Satd. Flow (perm) | 0 | 1756 | 0 | 0 | 1766 | 0 | 0 | 1798 | 0 | 0 | 1747 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.72 | 0.95 | 0.58 | 0.72 | 0.82 | 0.54 | 0.42 | 0.74 | 0.88 | 0.75 | 0.88 | 0.91 |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 232 | 275 | 12 | 99 | 218 | 54 | 12 | 358 | 268 | 35 | 217 | 246 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 519 | 0 | 0 | 371 | 0 | 0 | 638 | 0 | 0 | 498 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 85.6% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 413 | 428 | 467 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.929 | |
| Flt Protected | | | | | 0.974 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1634 | 3285 | 0 |
| Flt Permitted | | | | | 0.974 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1634 | 3285 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 259.2 | | 40.3 | |
| Travel Time (s) | 2.3 | | 18.7 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.89 | 0.72 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 464 | 594 | 537 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 464 | 1131 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.98 | 0.98 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

05/05/2016



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 260 | 1187 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.992 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3467 | 4842 | 0 | 4879 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3467 | 4842 | 0 | 4879 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 193.3 | | 63.1 |
| Travel Time (s) | | 13.9 | | 4.5 |
| Peak Hour Factor | 0.76 | 0.84 | 0.38 | 0.95 |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 342 | 1413 | 76 | 1636 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 342 | 1489 | 0 | 1636 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.03 | 1.03 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 59.0 | 46.0 | 0.0 | 53.0 |
| Total Split (%) | 56.2% | 43.8% | 0.0% | 50.5% |
| Maximum Green (s) | 55.0 | 40.0 | | 48.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 55.0 | 40.0 | | 54.0 |
| Actuated g/C Ratio | 0.52 | 0.38 | | 0.51 |
| v/c Ratio | 0.19 | 0.81 | | 0.65 |
| Control Delay | 13.6 | 33.3 | | 20.2 |
| Queue Delay | 139.2 | 0.0 | | 185.8 |
| Total Delay | 152.7 | 33.3 | | 206.0 |
| LOS | F | C | | F |
| Approach Delay | | 33.3 | | 206.0 |
| Approach LOS | | C | | F |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

Intersection Summary

Area Type: Other

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 50 (48%), Referenced to phase 4:NET and 8:WBL, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 126.6

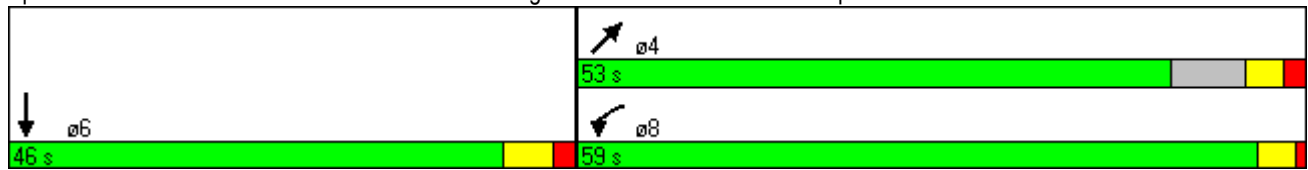
Intersection LOS: F

Intersection Capacity Utilization 73.5%

ICU Level of Service D

Analysis Period (min) 15

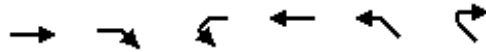
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016

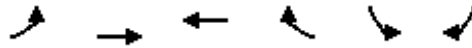


| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 659 | 182 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.953 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3373 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3373 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 18.4 | | 61.1 | |
| Travel Time (s) | 2.3 | | 1.3 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 716 | 331 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1047 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | | 15 | |
| Sign Control | Free | | Free | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.4% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1787 | 1900 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1787 | 1900 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.63 | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 143 | 236 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 143 | 236 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | 0.850 | | | | |
| Fl _t Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2677 | 1787 | 0 | 0 | 0 |
| Fl _t Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2677 | 1787 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.84 | 0.63 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 530 | 143 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 530 | 143 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↔ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frnt | | | | | | | | 0.965 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3522 | 0 | 0 | 0 | 0 | 0 | 4651 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3522 | 0 | 0 | 0 | 0 | 0 | 4651 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.62 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 | 0.78 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 110 | 1063 | 0 | 0 | 0 | 0 | 0 | 940 | 290 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1173 | 0 | 0 | 0 | 0 | 0 | 1230 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 21.0 | 21.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 58.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 26.6% | 26.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 73.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 53.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 53.0 | | | | |
| Actuated g/C Ratio | | 0.20 | | | | | | 0.67 | | | | |
| v/c Ratio | | 1.65 | | | | | | 0.39 | | | | |
| Control Delay | | 322.5 | | | | | | 6.3 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 322.5 | | | | | | 6.3 | | | | |
| LOS | | F | | | | | | A | | | | |
| Approach Delay | | 322.5 | | | | | | 6.3 | | | | |
| Approach LOS | | F | | | | | | A | | | | |

Intersection Summary

Area Type: Other

Cycle Length: 79

Actuated Cycle Length: 79

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 1.65

Intersection Signal Delay: 160.7

Intersection LOS: F

Intersection Capacity Utilization 53.9%

ICU Level of Service A

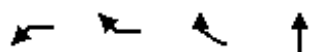
Analysis Period (min) 15

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 457 | 441 | 292 | 1525 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.934 | 0.850 | | |
| Flt Protected | 0.973 | | | |
| Satd. Flow (prot) | 3270 | 1420 | 0 | 5085 |
| Flt Permitted | 0.973 | | | |
| Satd. Flow (perm) | 3270 | 1420 | 0 | 5085 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.88 | 0.84 | 0.91 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 519 | 525 | 321 | 1658 |
| Shared Lane Traffic (%) | | 78% | | |
| Lane Group Flow (vph) | 929 | 436 | 0 | 1658 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | NA | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 43.0 | 43.0 | 0.0 | 30.0 |
| Total Split (%) | 58.9% | 58.9% | 0.0% | 41.1% |
| Maximum Green (s) | 38.0 | 38.0 | | 25.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 38.0 | 38.0 | | 25.0 |
| Actuated g/C Ratio | 0.52 | 0.52 | | 0.34 |
| v/c Ratio | 0.55 | 0.59 | | 0.95 |
| Control Delay | 13.2 | 16.2 | | 37.6 |
| Queue Delay | 0.0 | 0.0 | | 231.5 |
| Total Delay | 13.2 | 16.2 | | 269.1 |
| LOS | B | B | | F |
| Approach Delay | 14.2 | | | 269.1 |
| Approach LOS | B | | | F |

Intersection Summary

Area Type: Other
Cycle Length: 73
Actuated Cycle Length: 73
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 154.0 Intersection LOS: F
Intersection Capacity Utilization 69.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3300 | 4888 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3300 | 4888 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.71 | 0.84 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1410 | 1560 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1410 | 1560 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 96.0 | 96.0 | 8.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 92.3% | 92.3% | 8% |
| Maximum Green (s) | | | | | 90.0 | 90.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 90.0 | 90.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.49 | 0.37 | |
| Control Delay | | | | | 2.3 | 1.6 | |
| Queue Delay | | | | | 2.7 | 1.1 | |
| Total Delay | | | | | 5.0 | 2.8 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------|-----|-----|-----|-----|-----|-----|-----|
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 3.8 | |
| Approach LOS | | | | | | A | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.49 |
| Intersection Signal Delay: | 3.8 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 55.7% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↙ | ↘ | ↗ | | |
| Volume (vph) | 0 | 1802 | 0 | 0 | 1952 | 282 | 585 | 258 | 252 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | 0.980 | | | 0.985 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.957 | | | |
| Satd. Flow (prot) | 0 | 4792 | 0 | 0 | 4793 | 0 | 1787 | 1722 | 1475 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.957 | | | |
| Satd. Flow (perm) | 0 | 4792 | 0 | 0 | 4793 | 0 | 1787 | 1722 | 1475 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.85 | 0.78 | 0.55 | 0.88 | 0.77 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 3% | 2% | 1% | 4% | 4% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1980 | 0 | 0 | 2296 | 362 | 1064 | 293 | 327 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 1980 | 0 | 0 | 2658 | 0 | 1064 | 326 | 294 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 73.0 | 0.0 | 0.0 | 68.0 | 0.0 | 37.0 | 37.0 | 37.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 66.4% | 0.0% | 0.0% | 61.8% | 0.0% | 33.6% | 33.6% | 33.6% | 0.0% | 0.0% |
| Maximum Green (s) | | 68.0 | | | 64.0 | | 32.0 | 32.0 | 32.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 68.0 | | | 69.0 | | 32.0 | 32.0 | 32.0 | | |
| Actuated g/C Ratio | | 0.62 | | | 0.63 | | 0.29 | 0.29 | 0.29 | | |
| v/c Ratio | | 0.67 | | | 0.88 | | 2.05 | 0.65 | 0.69 | | |
| Control Delay | | 15.1 | | | 21.8 | | 501.8 | 41.3 | 44.1 | | |
| Queue Delay | | 140.0 | | | 0.0 | | 202.2 | 649.6 | 630.4 | | |
| Total Delay | | 155.1 | | | 21.8 | | 704.0 | 690.9 | 674.4 | | |
| LOS | | F | | | C | | F | F | F | | |
| Approach Delay | | 155.1 | | | 21.8 | | | 696.3 | | | |
| Approach LOS | | F | | | C | | | F | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 2.05

Intersection Signal Delay: 243.2

Intersection LOS: F

Intersection Capacity Utilization 140.1%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|--------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | ↕↕ | |
| Volume (vph) | 433 | 226 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 662 | 54 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Fr t | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.974 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2703 | 0 |
| Flt Permitted | | 0.974 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2703 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 155.6 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 11.2 | | |
| Peak Hour Factor | 0.84 | 0.49 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.64 |
| Adj. Flow (vph) | 515 | 461 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 720 | 84 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 804 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | custom | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 85.0 | 85.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.0 | 0.0 |
| Total Split (%) | 76.6% | 76.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 23.4% | 0.0% |
| Maximum Green (s) | 81.0 | 81.0 | | | | | | | | 22.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 81.0 | | | | | | | | 22.0 | |
| Actuated g/C Ratio | | 0.73 | | | | | | | | 0.20 | |
| v/c Ratio | | 0.39 | | | | | | | | 1.50 | |
| Control Delay | | 6.2 | | | | | | | | 267.8 | |
| Queue Delay | | 0.0 | | | | | | | | 0.0 | |
| Total Delay | | 6.2 | | | | | | | | 267.8 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 6.2 | | | | | | | | | |
| Approach LOS | | A | | | | | | | | | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016

Intersection Summary

Area Type: Other

Cycle Length: 111

Actuated Cycle Length: 111

Offset: 46 (41%), Referenced to phase 4:EBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 1.50

Intersection Signal Delay: 124.3

Intersection LOS: F

Intersection Capacity Utilization 55.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
 37: Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 764 | 0 | 540 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3503 | 0 | 2731 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3503 | 0 | 2731 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 208.9 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.0 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.87 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 878 | 0 | 587 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 878 | 0 | 587 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

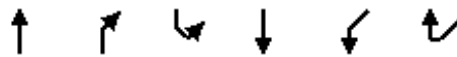
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

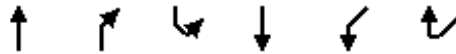


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Fr _t | 0.936 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4671 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4671 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.83 | 0.60 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2159 | 1600 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3759 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 0.95 | 0.95 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 96.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Total Split (%) | 92.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8% |
| Maximum Green (s) | 90.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 90.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.18dr | | | | | | |
| Control Delay | 9.0 | | | | | | |
| Queue Delay | 103.3 | | | | | | |
| Total Delay | 112.3 | | | | | | |
| LOS | F | | | | | | |
| Approach Delay | 112.3 | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|--------------|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 32 (31%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.93 |
| Intersection Signal Delay: | 112.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 61.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.989 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3333 | 1419 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3333 | 1419 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.65 | 0.92 | 0.83 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 342 | 189 | 0 | 2159 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 15% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 370 | 161 | 0 | 2159 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.02 | 1.02 | 1.02 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | Perm | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 15.0 | 30.0 | 30.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 33.3% | 33.3% | 66.7% | 66.7% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 24.0 | 24.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 24.0 | | | | |
| Actuated g/C Ratio | | | | | 0.22 | 0.22 | | 0.53 | | | | |
| v/c Ratio | | | | | 0.50 | 0.51 | | 0.80 | | | | |
| Control Delay | | | | | 18.1 | 22.0 | | 11.6 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 102.2 | | | | |
| Total Delay | | | | | 18.1 | 22.0 | | 113.8 | | | | |
| LOS | | | | | B | C | | F | | | | |
| Approach Delay | | | | | 19.3 | | | 113.8 | | | | |
| Approach LOS | | | | | B | | | F | | | | |

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 5 (11%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 95.1

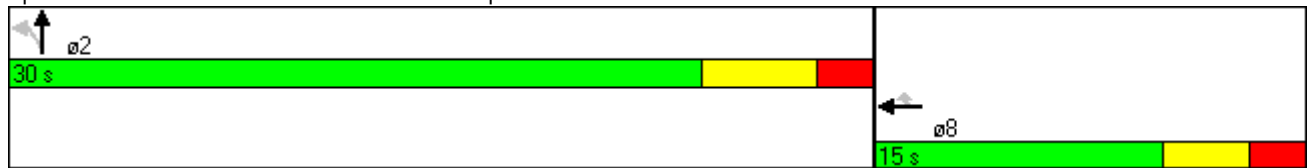
Intersection LOS: F

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 725 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.947 | |
| Flt Protected | 0.950 | 0.997 | 0.950 | | |
| Satd. Flow (prot) | 1595 | 3347 | 1715 | 4604 | 0 |
| Flt Permitted | 0.950 | 0.997 | 0.950 | | |
| Satd. Flow (perm) | 1595 | 3347 | 1715 | 4604 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 213.6 | |
| Travel Time (s) | | 2.4 | | 15.4 | |
| Peak Hour Factor | 0.79 | 0.91 | 0.66 | 0.95 | 0.92 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 227 | 424 | 1048 | 1447 | 788 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 204 | 447 | 1048 | 2235 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | 0.0 |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | 0.0% |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.66 | 0.69 | 0.81 | 0.65 | |
| Control Delay | 63.8 | 59.1 | 17.9 | 9.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 63.8 | 59.1 | 17.9 | 9.6 | |

Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------|-----|------|-----|------|-----|
| LOS | E | E | B | A | |
| Approach Delay | | 60.6 | | 12.3 | |
| Approach LOS | | E | | B | |

Intersection Summary

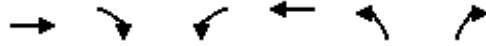
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 24 (17%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 70 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 20.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 60.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| | |
|-------|------|
| 2 | 4 |
| 109 s | 31 s |

Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 06/05/2016



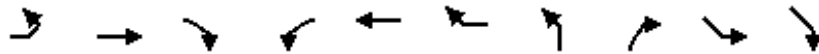
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↓ | | | | | |
| Volume (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.993 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 5008 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 5008 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.53 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1239 | 62 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1301 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coimbra



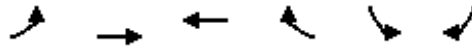
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↗ | ↘ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1807 | 1464 | 3502 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1807 | 1464 | 3502 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.25 | 0.38 | 0.95 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 8 | 71 | 728 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 8 | 71 | 728 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↘ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 5036 | 0 | 0 | 1770 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 5036 | 0 | 0 | 1770 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.25 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 619 | 0 | 0 | 8 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 619 | 0 | 0 | 8 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|--------|------|------|--------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr't | | 0.850 | | | 0.945 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3575 | 0 | 0 | 4685 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3575 | 0 | 0 | 4685 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.87 | 0.92 | 0.92 | 0.84 | 0.25 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1239 | 0 | 0 | 1468 | 856 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1239 | 0 | 0 | 2324 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | custom | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | 0.0 | 59.0 | 0.0 | 0.0 | 63.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 48.4% | 0.0% | 0.0% | 51.6% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 55.0 | | | 59.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 55.0 | | | 59.0 | | | |
| Actuated g/C Ratio | | 0.45 | | | 0.48 | | | |
| v/c Ratio | | 0.77 | | | 1.10dr | | | |
| Control Delay | | 32.2 | | | 57.3 | | | |
| Queue Delay | | 0.0 | | | 308.5 | | | |
| Total Delay | | 32.2 | | | 365.8 | | | |
| LOS | | C | | | F | | | |
| Approach Delay | | | | | 365.8 | | | |
| Approach LOS | | | | | F | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016

Intersection Summary

Area Type: Other

Cycle Length: 122

Actuated Cycle Length: 122

Offset: 112 (92%), Referenced to phase 6: SBT, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 249.8

Intersection LOS: F

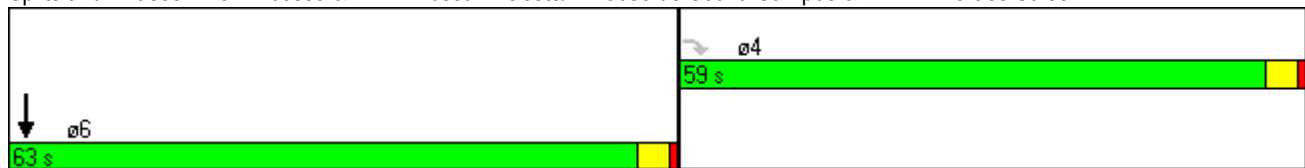
Intersection Capacity Utilization 60.4%

ICU Level of Service B

Analysis Period (min) 15

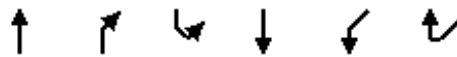
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
 56: Rua Barão de Paranapanema & Acesso

06/05/2016



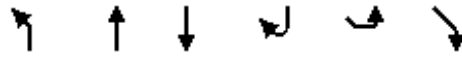
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.53 | 0.25 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 62 | 856 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 62 | 856 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 21.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 59: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4825 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4825 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 128.3 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.2 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.67 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 51 | 1188 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1239 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 136.8 | | | 22.0 |
| Travel Time (s) | 2.4 | | 9.8 | | | 1.6 |
| Peak Hour Factor | 0.67 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 51 | 0 | 0 | 0 | 0 | 952 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 51 | 0 | 0 | 0 | 0 | 952 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 45.0% ICU Level of Service A
 Analysis Period (min) 15

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↗ | | | ↖↗↖↗ | | |
| Volume (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.88 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Adj. Flow (vph) | 684 | 0 | 0 | 1014 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 684 | 0 | 0 | 1014 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | NA | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 28.0 | 0.0 | 0.0 | 49.0 | 0.0 | 0.0 |
| Total Split (%) | 36.4% | 0.0% | 0.0% | 63.6% | 0.0% | 0.0% |
| Maximum Green (s) | 21.0 | | | 44.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 21.0 | | | 44.0 | | |
| Actuated g/C Ratio | 0.27 | | | 0.57 | | |
| v/c Ratio | 0.73 | | | 0.35 | | |
| Control Delay | 30.8 | | | 9.3 | | |
| Queue Delay | 651.0 | | | 2.6 | | |
| Total Delay | 681.8 | | | 11.8 | | |
| LOS | F | | | B | | |
| Approach Delay | 681.8 | | | 11.8 | | |
| Approach LOS | F | | | B | | |

Intersection Summary

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016

Area Type: Other

Cycle Length: 77

Actuated Cycle Length: 77

Offset: 4 (5%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 281.7

Intersection LOS: F

Intersection Capacity Utilization 100.6%

ICU Level of Service G

Analysis Period (min) 15

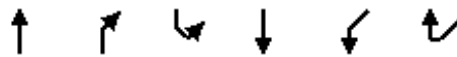
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↗ | |
| Volume (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5085 | 3433 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5085 | 3433 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.84 | 0.88 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 1624 | 519 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1624 | 519 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 47.0 | 33.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 58.8% | 41.3% | 0.0% |
| Maximum Green (s) | | | | 42.0 | 29.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 29.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.36 | |
| v/c Ratio | | | | 0.61 | 0.42 | |
| Control Delay | | | | 14.5 | 20.4 | |
| Queue Delay | | | | 280.4 | 0.0 | |
| Total Delay | | | | 294.9 | 20.4 | |
| LOS | | | | F | C | |
| Approach Delay | | | | 294.9 | 20.4 | |
| Approach LOS | | | | F | C | |

Intersection Summary

Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 228.4

Intersection LOS: F

Intersection Capacity Utilization 46.9%

ICU Level of Service A

Analysis Period (min) 15

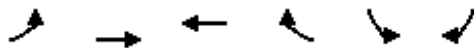
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & R. Antônio A. de Camargo

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.995 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3504 | 0 | 0 | 1644 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3504 | 0 | 0 | 1644 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.79 | 0.25 | 0.92 | 0.25 |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 471 | 16 | 0 | 44 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 487 | 0 | 0 | 44 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.02 | 1.02 | 1.02 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 20.4% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

06/05/2016

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|--------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3574 | 0 | 0 | 0 | 0 | 3573 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3574 | 0 | 0 | 0 | 0 | 3573 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 1.00 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1636 | 0 | 0 | 0 | 0 | 1915 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1636 | 0 | 0 | 0 | 0 | 1915 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 59.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 |
| Total Split (%) | 66.3% | 0.0% | 0.0% | 0.0% | 0.0% | 33.7% |
| Maximum Green (s) | 55.0 | | | | | 24.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 55.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.27 |
| v/c Ratio | 0.74 | | | | | 1.99 |
| Control Delay | 14.6 | | | | | 470.9 |
| Queue Delay | 184.5 | | | | | 229.9 |
| Total Delay | 199.1 | | | | | 700.8 |
| LOS | F | | | | | F |
| Approach Delay | 199.1 | | | | | |
| Approach LOS | F | | | | | |

Intersection Summary

Area Type: Other
Cycle Length: 89
Actuated Cycle Length: 89
Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
Natural Cycle: 140
Control Type: Pretimed
Maximum v/c Ratio: 1.99
Intersection Signal Delay: 469.7 Intersection LOS: F
Intersection Capacity Utilization 96.0% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Mendes Machado

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR | |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|--|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 1701 | 375 | 0 | 2537 | 0 | 101 | 520 | 143 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 | |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 | |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 | |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | | | | | 0.950 | | | | |
| Satd. Flow (prot) | 0 | 3184 | 1398 | 0 | 4885 | 0 | 0 | 3398 | 1537 | 0 | 0 | |
| Flt Permitted | | | | | | | | 0.950 | | | | |
| Satd. Flow (perm) | 0 | 3184 | 1398 | 0 | 4885 | 0 | 0 | 3398 | 1537 | 0 | 0 | |
| Right Turn on Red | | | No | | | No | | | No | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | | |
| Link Distance (m) | | 92.3 | | | 58.6 | | | 63.3 | | 40.3 | | |
| Travel Time (s) | | 6.6 | | | 4.2 | | | 4.6 | | 2.9 | | |
| Peak Hour Factor | 0.92 | 0.91 | 0.72 | 0.92 | 0.85 | 0.92 | 0.81 | 0.77 | 0.87 | 0.92 | 0.92 | |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 3% | 2% | 1% | 1% | 3% | 2% | 2% | |
| Adj. Flow (vph) | 0 | 1869 | 521 | 0 | 2985 | 0 | 125 | 675 | 164 | 0 | 0 | |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1921 | 469 | 0 | 2985 | 0 | 0 | 800 | 164 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 | |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 | |
| Turn Type | | NA | Perm | | NA | | Perm | NA | Perm | | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | | |
| Total Split (s) | 0.0 | 76.0 | 76.0 | 0.0 | 73.0 | 0.0 | 38.0 | 38.0 | 38.0 | 0.0 | 0.0 | |
| Total Split (%) | 0.0% | 66.7% | 66.7% | 0.0% | 64.0% | 0.0% | 33.3% | 33.3% | 33.3% | 0.0% | 0.0% | |
| Maximum Green (s) | | 72.0 | 72.0 | | 68.0 | | 33.0 | 33.0 | 33.0 | | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | | |
| Act Effct Green (s) | | 72.0 | 72.0 | | 71.0 | | 33.0 | 33.0 | 33.0 | | | |
| Actuated g/C Ratio | | 0.63 | 0.63 | | 0.62 | | 0.29 | 0.29 | 0.29 | | | |
| v/c Ratio | | 0.96 | 0.53 | | 0.98 | | 0.81 | 0.37 | 0.37 | | | |
| Control Delay | | 32.2 | 14.4 | | 33.8 | | 45.4 | 35.2 | 35.2 | | | |
| Queue Delay | | 0.0 | 0.0 | | 191.7 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | | 32.2 | 14.4 | | 225.5 | | 45.4 | 35.2 | 35.2 | | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

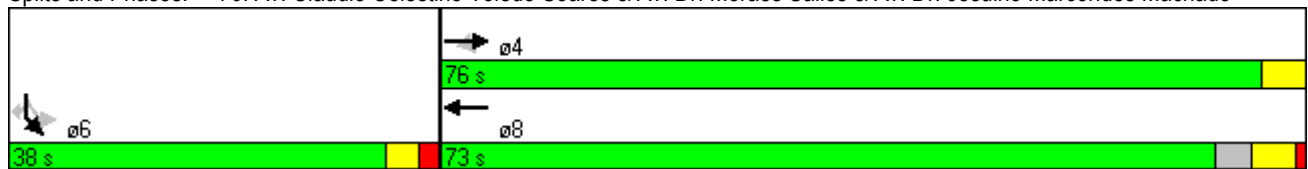


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------|-----|------|-----|-----|-------|-----|------|------|-----|-----|-----|
| LOS | | C | B | | F | | | D | D | | |
| Approach Delay | | 28.7 | | | 225.5 | | | 43.7 | | | |
| Approach LOS | | C | | | F | | | D | | | |

Intersection Summary

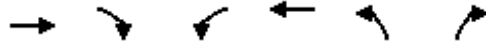
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 114 |
| Actuated Cycle Length: | 114 |
| Offset: | 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 80 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 123.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 140.1% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings
71: Av. Guarani & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↗ |
| Volume (vph) | 1665 | 48 | 0 | 2680 | 0 | 444 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.0 | 4.0 |
| Grade (%) | 14% | | | 0% | 14% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.994 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4534 | 0 | 0 | 5036 | 0 | 1558 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4534 | 0 | 0 | 5036 | 0 | 1558 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 61.5 | | | 103.4 | 86.4 | |
| Travel Time (s) | 4.4 | | | 7.4 | 6.2 | |
| Peak Hour Factor | 0.96 | 0.68 | 0.92 | 0.85 | 0.92 | 0.90 |
| Heavy Vehicles (%) | 6% | 0% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 1734 | 71 | 0 | 3153 | 0 | 493 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1805 | 0 | 0 | 3153 | 0 | 493 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | R NA |
| Median Width(m) | 4.8 | | | 4.8 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.10 | 1.10 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 67.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

| Intersection | | | | |
|------------------------------|-------|-------|-------|-------|
| Intersection Delay (sec/veh) | 17.6 | | | |
| Intersection LOS | C | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 2 | 2 | 2 | 2 |
| Adjusted Approach Flow (vph) | 519 | 371 | 638 | 498 |
| Demand Flow Rate (pc/h) | 532 | 375 | 641 | 507 |
| Vehicles Circulating (pc/h) | 358 | 604 | 558 | 333 |
| Vehicles Exiting (pc/h) | 482 | 595 | 332 | 646 |
| Follow-Up Headway (s) | 3.186 | 3.186 | 3.186 | 3.186 |
| Ped Vol. Crossing Leg (#/hr) | 0 | 0 | 0 | 0 |
| Ped Capacity Adjustment | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay (sec/veh) | 13.4 | 12.4 | 28.3 | 12.1 |
| Approach LOS | B | B | D | B |
| Lane | Left | Left | Left | Left |
| Designated moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| Right Turn Channelized | | | | |
| Lane Utilization | 1.000 | 1.000 | 1.000 | 1.000 |
| Critical Headway (s) | 4.113 | 4.113 | 4.113 | 4.113 |
| Entry Flow Rate (pc/h) | 532 | 375 | 641 | 507 |
| Capacity, Entry Lane (pc/h) | 879 | 740 | 765 | 895 |
| Entry HV Adjustment Factor | 0.976 | 0.988 | 0.995 | 0.982 |
| Flow Rate, Entry (vph) | 519 | 371 | 638 | 498 |
| Capacity, Entry (vph) | 858 | 732 | 761 | 879 |
| Volume to Capacity Ratio | 0.605 | 0.507 | 0.838 | 0.566 |
| Control Delay (sec/veh) | 13.4 | 12.4 | 28.3 | 12.1 |
| Level of Service | B | B | D | B |
| 95th-Percentile Queue (veh) | 4 | 3 | 10 | 4 |

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 493 | 1022 | 1515 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.33 |
| Stops (#) | 493 | 0 | 493 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 2 | 4 |
| Distance Traveled (km) | 92 | 111 | 203 |
| Fuel Consumed (l) | 20 | 11 | 30 |
| Fuel Economy (km/l) | 4.6 | 10.5 | 6.7 |
| CO Emissions (kg) | 0.37 | 0.20 | 0.56 |
| NOx Emissions (kg) | 0.07 | 0.04 | 0.11 |
| VOC Emissions (kg) | 0.08 | 0.05 | 0.13 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 946 | 533 | 149 | 108 | 1736 |
| Control Delay / Veh (s/v) | 206 | 20 | 25 | 24 | 122 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 206 | 20 | 25 | 24 | 122 |
| Total Delay (hr) | 54 | 3 | 1 | 1 | 59 |
| Stops / Veh | 0.82 | 0.82 | 0.89 | 0.86 | 0.83 |
| Stops (#) | 772 | 437 | 132 | 93 | 1434 |
| Average Speed (km/hr) | 3 | 29 | 11 | 11 | 6 |
| Total Travel Time (hr) | 58 | 7 | 1 | 1 | 67 |
| Distance Traveled (km) | 176 | 196 | 15 | 11 | 397 |
| Fuel Consumed (l) | 184 | 37 | 7 | 5 | 233 |
| Fuel Economy (km/l) | 1.0 | 5.4 | 2.0 | 2.1 | 1.7 |
| CO Emissions (kg) | 3.42 | 0.68 | 0.14 | 0.10 | 4.33 |
| NOx Emissions (kg) | 0.66 | 0.13 | 0.03 | 0.02 | 0.84 |
| VOC Emissions (kg) | 0.79 | 0.16 | 0.03 | 0.02 | 1.00 |
| Unserviced Vehicles (#) | 265 | 0 | 0 | 0 | 265 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

3: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 1310 | 1310 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 7 | 7 |
| Distance Traveled (km) | 364 | 364 |
| Fuel Consumed (l) | 35 | 35 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.64 | 0.64 |
| NOx Emissions (kg) | 0.12 | 0.12 |
| VOC Emissions (kg) | 0.15 | 0.15 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 546 | 1185 | 1731 |
| Control Delay / Veh (s/v) | 35 | 2 | 13 |
| Queue Delay / Veh (s/v) | 0 | 1 | 1 |
| Total Delay / Veh (s/v) | 35 | 3 | 13 |
| Total Delay (hr) | 5 | 1 | 6 |
| Stops / Veh | 0.87 | 0.07 | 0.33 |
| Stops (#) | 476 | 87 | 563 |
| Average Speed (km/hr) | 4 | 25 | 10 |
| Total Travel Time (hr) | 6 | 2 | 8 |
| Distance Traveled (km) | 26 | 54 | 79 |
| Fuel Consumed (l) | 28 | 10 | 38 |
| Fuel Economy (km/l) | 0.9 | 5.4 | 2.1 |
| CO Emissions (kg) | 0.52 | 0.18 | 0.70 |
| NOx Emissions (kg) | 0.10 | 0.04 | 0.14 |
| VOC Emissions (kg) | 0.12 | 0.04 | 0.16 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 602 | 1820 | 2422 |
| Control Delay / Veh (s/v) | 25 | 17 | 19 |
| Queue Delay / Veh (s/v) | 0 | 133 | 100 |
| Total Delay / Veh (s/v) | 25 | 150 | 119 |
| Total Delay (hr) | 4 | 76 | 80 |
| Stops / Veh | 0.84 | 0.76 | 0.78 |
| Stops (#) | 503 | 1392 | 1895 |
| Average Speed (km/hr) | 7 | 2 | 2 |
| Total Travel Time (hr) | 5 | 78 | 83 |
| Distance Traveled (km) | 35 | 124 | 160 |
| Fuel Consumed (l) | 26 | 253 | 279 |
| Fuel Economy (km/l) | 1.3 | 0.5 | 0.6 |
| CO Emissions (kg) | 0.49 | 4.70 | 5.19 |
| NOx Emissions (kg) | 0.09 | 0.91 | 1.00 |
| VOC Emissions (kg) | 0.11 | 1.08 | 1.20 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

| Direction | EB | SB | NW | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 179 | 1189 | 441 | 1809 |
| Control Delay / Veh (s/v) | 0 | 19 | 14 | 16 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 19 | 14 | 16 |
| Total Delay (hr) | 0 | 6 | 2 | 8 |
| Stops / Veh | 0.00 | 0.77 | 0.61 | 0.65 |
| Stops (#) | 0 | 911 | 271 | 1182 |
| Average Speed (km/hr) | 47 | 17 | 7 | 16 |
| Total Travel Time (hr) | 0 | 9 | 2 | 12 |
| Distance Traveled (km) | 7 | 162 | 14 | 182 |
| Fuel Consumed (l) | 1 | 53 | 12 | 66 |
| Fuel Economy (km/l) | NA | 3.0 | 1.1 | 2.8 |
| CO Emissions (kg) | 0.01 | 0.99 | 0.22 | 1.22 |
| NOx Emissions (kg) | 0.00 | 0.19 | 0.04 | 0.24 |
| VOC Emissions (kg) | 0.00 | 0.23 | 0.05 | 0.28 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

7: Av. Princesa D'Oeste

| Direction | EB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1001 | 1751 | 2752 |
| Control Delay / Veh (s/v) | 19 | 314 | 206 |
| Queue Delay / Veh (s/v) | 64 | 26 | 40 |
| Total Delay / Veh (s/v) | 83 | 340 | 247 |
| Total Delay (hr) | 23 | 165 | 188 |
| Stops / Veh | 0.73 | 0.72 | 0.72 |
| Stops (#) | 731 | 1254 | 1985 |
| Average Speed (km/hr) | 1 | 4 | 4 |
| Total Travel Time (hr) | 24 | 181 | 205 |
| Distance Traveled (km) | 24 | 784 | 808 |
| Fuel Consumed (l) | 83 | 561 | 643 |
| Fuel Economy (km/l) | 0.3 | 1.4 | 1.3 |
| CO Emissions (kg) | 1.54 | 10.43 | 11.97 |
| NOx Emissions (kg) | 0.30 | 2.01 | 2.31 |
| VOC Emissions (kg) | 0.35 | 2.41 | 2.76 |
| Unserviced Vehicles (#) | 0 | 675 | 675 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

8: Av. Ayrton Senna da Silva

| Direction | EB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1148 | 636 | 1784 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 105 | 37 | 142 |
| Fuel Consumed (l) | 10 | 4 | 13 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.19 | 0.07 | 0.25 |
| NOx Emissions (kg) | 0.04 | 0.01 | 0.05 |
| VOC Emissions (kg) | 0.04 | 0.02 | 0.06 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 435 | 279 | 506 | 441 | 1661 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Stops (#) | 435 | 279 | 506 | 441 | 1661 |
| Average Speed (km/hr) | 50 | 50 | 50 | 50 | 50 |
| Total Travel Time (hr) | 3 | 1 | 1 | 1 | 6 |
| Distance Traveled (km) | 160 | 34 | 61 | 47 | 303 |
| Fuel Consumed (l) | 25 | 10 | 17 | 14 | 66 |
| Fuel Economy (km/l) | 6.4 | 3.6 | 3.6 | 3.3 | 4.6 |
| CO Emissions (kg) | 0.46 | 0.18 | 0.32 | 0.27 | 1.23 |
| NOx Emissions (kg) | 0.09 | 0.03 | 0.06 | 0.05 | 0.24 |
| VOC Emissions (kg) | 0.11 | 0.04 | 0.07 | 0.06 | 0.28 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

| Direction | NB | SE | All |
|------------------------------|------|------|------|
| Volume (vph) | 413 | 895 | 1308 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.32 |
| Stops (#) | 413 | 0 | 413 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 107 | 36 | 143 |
| Fuel Consumed (l) | 19 | 3 | 23 |
| Fuel Economy (km/l) | 5.5 | 10.5 | 6.3 |
| CO Emissions (kg) | 0.36 | 0.06 | 0.43 |
| NOx Emissions (kg) | 0.07 | 0.01 | 0.08 |
| VOC Emissions (kg) | 0.08 | 0.01 | 0.10 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Direction | WB | SB | NE | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 260 | 1216 | 1554 | 3030 |
| Control Delay / Veh (s/v) | 14 | 33 | 20 | 25 |
| Queue Delay / Veh (s/v) | 139 | 0 | 186 | 107 |
| Total Delay / Veh (s/v) | 153 | 33 | 206 | 132 |
| Total Delay (hr) | 11 | 11 | 89 | 111 |
| Stops / Veh | 0.50 | 0.87 | 0.70 | 0.75 |
| Stops (#) | 130 | 1052 | 1085 | 2267 |
| Average Speed (km/hr) | 1 | 15 | 1 | 3 |
| Total Travel Time (hr) | 11 | 16 | 91 | 118 |
| Distance Traveled (km) | 9 | 235 | 98 | 342 |
| Fuel Consumed (l) | 34 | 77 | 280 | 391 |
| Fuel Economy (km/l) | 0.2 | 3.1 | 0.4 | 0.9 |
| CO Emissions (kg) | 0.64 | 1.43 | 5.21 | 7.28 |
| NOx Emissions (kg) | 0.12 | 0.28 | 1.01 | 1.40 |
| VOC Emissions (kg) | 0.15 | 0.33 | 1.20 | 1.68 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 841 | 841 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 51 | 51 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 27 | 27 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.05 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

23: Rua Proença

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 269 | 269 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 26 | 26 |
| Fuel Consumed (l) | 2 | 2 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.05 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

24: Rua Barão de Paranapanema

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 445 | 90 | 535 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 15 | 2 | 17 |
| Fuel Consumed (l) | 1 | 0 | 2 |
| Fuel Economy (km/l) | 10.5 | NA | 10.5 |
| CO Emissions (kg) | 0.03 | 0.00 | 0.03 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

25: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 865 | 1082 | 1947 |
| Control Delay / Veh (s/v) | 323 | 6 | 147 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 323 | 6 | 147 |
| Total Delay (hr) | 78 | 2 | 79 |
| Stops / Veh | 0.75 | 0.40 | 0.56 |
| Stops (#) | 651 | 437 | 1088 |
| Average Speed (km/hr) | 0 | 12 | 1 |
| Total Travel Time (hr) | 78 | 2 | 81 |
| Distance Traveled (km) | 27 | 30 | 57 |
| Fuel Consumed (l) | 232 | 18 | 250 |
| Fuel Economy (km/l) | 0.1 | 1.7 | 0.2 |
| CO Emissions (kg) | 4.31 | 0.33 | 4.64 |
| NOx Emissions (kg) | 0.83 | 0.06 | 0.90 |
| VOC Emissions (kg) | 0.99 | 0.08 | 1.07 |
| Unserviced Vehicles (#) | 339 | 0 | 339 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

26: Rua Conde D'Eu & Av. Princesa D'Oeste

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1190 | 1525 | 2715 |
| Control Delay / Veh (s/v) | 14 | 38 | 27 |
| Queue Delay / Veh (s/v) | 0 | 232 | 130 |
| Total Delay / Veh (s/v) | 14 | 269 | 157 |
| Total Delay (hr) | 5 | 114 | 119 |
| Stops / Veh | 0.64 | 0.88 | 0.77 |
| Stops (#) | 765 | 1335 | 2100 |
| Average Speed (km/hr) | 18 | 1 | 2 |
| Total Travel Time (hr) | 7 | 116 | 123 |
| Distance Traveled (km) | 129 | 105 | 233 |
| Fuel Consumed (l) | 42 | 356 | 398 |
| Fuel Economy (km/l) | 3.0 | 0.3 | 0.6 |
| CO Emissions (kg) | 0.79 | 6.62 | 7.40 |
| NOx Emissions (kg) | 0.15 | 1.28 | 1.43 |
| VOC Emissions (kg) | 0.18 | 1.53 | 1.71 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

28: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 2311 | 2311 |
| Control Delay / Veh (s/v) | 2 | 2 |
| Queue Delay / Veh (s/v) | 2 | 2 |
| Total Delay / Veh (s/v) | 4 | 4 |
| Total Delay (hr) | 2 | 2 |
| Stops / Veh | 0.17 | 0.17 |
| Stops (#) | 398 | 398 |
| Average Speed (km/hr) | 31 | 31 |
| Total Travel Time (hr) | 6 | 6 |
| Distance Traveled (km) | 190 | 190 |
| Fuel Consumed (l) | 34 | 34 |
| Fuel Economy (km/l) | 5.6 | 5.6 |
| CO Emissions (kg) | 0.63 | 0.63 |
| NOx Emissions (kg) | 0.12 | 0.12 |
| VOC Emissions (kg) | 0.14 | 0.14 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | NB | All |
|------------------------------|------|------|-------|-------|
| Volume (vph) | 1802 | 2234 | 1094 | 5130 |
| Control Delay / Veh (s/v) | 15 | 22 | 288 | 76 |
| Queue Delay / Veh (s/v) | 140 | 0 | 406 | 136 |
| Total Delay / Veh (s/v) | 155 | 22 | 694 | 212 |
| Total Delay (hr) | 78 | 14 | 211 | 302 |
| Stops / Veh | 0.62 | 0.79 | 0.76 | 0.73 |
| Stops (#) | 1109 | 1776 | 836 | 3721 |
| Average Speed (km/hr) | 1 | 20 | 0 | 2 |
| Total Travel Time (hr) | 80 | 22 | 212 | 314 |
| Distance Traveled (km) | 106 | 441 | 41 | 588 |
| Fuel Consumed (l) | 250 | 119 | 607 | 977 |
| Fuel Economy (km/l) | 0.4 | 3.7 | 0.1 | 0.6 |
| CO Emissions (kg) | 4.65 | 2.22 | 11.30 | 18.16 |
| NOx Emissions (kg) | 0.90 | 0.43 | 2.18 | 3.51 |
| VOC Emissions (kg) | 1.07 | 0.51 | 2.61 | 4.19 |
| Unserviced Vehicles (#) | 0 | 0 | 299 | 299 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 658 | 716 | 1374 |
| Control Delay / Veh (s/v) | 6 | 268 | 142 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 6 | 268 | 142 |
| Total Delay (hr) | 1 | 53 | 54 |
| Stops / Veh | 0.34 | 0.74 | 0.55 |
| Stops (#) | 227 | 532 | 759 |
| Average Speed (km/hr) | 9 | 2 | 2 |
| Total Travel Time (hr) | 1 | 55 | 57 |
| Distance Traveled (km) | 12 | 111 | 124 |
| Fuel Consumed (l) | 9 | 170 | 179 |
| Fuel Economy (km/l) | 1.3 | 0.7 | 0.7 |
| CO Emissions (kg) | 0.17 | 3.16 | 3.34 |
| NOx Emissions (kg) | 0.03 | 0.61 | 0.64 |
| VOC Emissions (kg) | 0.04 | 0.73 | 0.77 |
| Unserviced Vehicles (#) | 0 | 239 | 239 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

37: Av. Dr. Jesuino Marcondes Machado

| Direction | SB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 764 | 540 | 1304 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 3 | 1 | 4 |
| Distance Traveled (km) | 160 | 32 | 192 |
| Fuel Consumed (l) | 15 | 3 | 18 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.28 | 0.06 | 0.34 |
| NOx Emissions (kg) | 0.05 | 0.01 | 0.07 |
| VOC Emissions (kg) | 0.07 | 0.01 | 0.08 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 2752 | 2752 |
| Control Delay / Veh (s/v) | 9 | 9 |
| Queue Delay / Veh (s/v) | 103 | 103 |
| Total Delay / Veh (s/v) | 112 | 112 |
| Total Delay (hr) | 86 | 86 |
| Stops / Veh | 0.60 | 0.60 |
| Stops (#) | 1663 | 1663 |
| Average Speed (km/hr) | 2 | 2 |
| Total Travel Time (hr) | 90 | 90 |
| Distance Traveled (km) | 184 | 184 |
| Fuel Consumed (l) | 293 | 293 |
| Fuel Economy (km/l) | 0.6 | 0.6 |
| CO Emissions (kg) | 5.44 | 5.44 |
| NOx Emissions (kg) | 1.05 | 1.05 |
| VOC Emissions (kg) | 1.26 | 1.26 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 383 | 1792 | 2175 |
| Control Delay / Veh (s/v) | 19 | 12 | 13 |
| Queue Delay / Veh (s/v) | 0 | 102 | 84 |
| Total Delay / Veh (s/v) | 19 | 114 | 97 |
| Total Delay (hr) | 2 | 57 | 59 |
| Stops / Veh | 0.83 | 0.73 | 0.75 |
| Stops (#) | 317 | 1312 | 1629 |
| Average Speed (km/hr) | 10 | 2 | 2 |
| Total Travel Time (hr) | 3 | 59 | 62 |
| Distance Traveled (km) | 27 | 113 | 140 |
| Fuel Consumed (l) | 15 | 197 | 212 |
| Fuel Economy (km/l) | 1.8 | 0.6 | 0.7 |
| CO Emissions (kg) | 0.28 | 3.67 | 3.95 |
| NOx Emissions (kg) | 0.05 | 0.71 | 0.76 |
| VOC Emissions (kg) | 0.07 | 0.85 | 0.91 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| Direction | EB | NE | All |
|------------------------------|------|------|------|
| Volume (vph) | 565 | 2792 | 3357 |
| Control Delay / Veh (s/v) | 60 | 12 | 20 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 60 | 12 | 20 |
| Total Delay (hr) | 9 | 9 | 19 |
| Stops / Veh | 0.92 | 0.50 | 0.57 |
| Stops (#) | 519 | 1393 | 1912 |
| Average Speed (km/hr) | 2 | 28 | 20 |
| Total Travel Time (hr) | 10 | 21 | 31 |
| Distance Traveled (km) | 19 | 596 | 615 |
| Fuel Consumed (l) | 40 | 113 | 153 |
| Fuel Economy (km/l) | 0.5 | 5.3 | 4.0 |
| CO Emissions (kg) | 0.74 | 2.10 | 2.84 |
| NOx Emissions (kg) | 0.14 | 0.41 | 0.55 |
| VOC Emissions (kg) | 0.17 | 0.48 | 0.65 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1111 | 1111 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 44 | 44 |
| Fuel Consumed (l) | 4 | 4 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.08 | 0.08 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coutinho

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 29 | 692 | 721 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 29 | 0 | 29 |
| Average Speed (km/hr) | 50 | 51 | 51 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 2 | 23 | 25 |
| Fuel Consumed (l) | 1 | 2 | 3 |
| Fuel Economy (km/l) | NA | 10.5 | 8.3 |
| CO Emissions (kg) | 0.01 | 0.04 | 0.06 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.00 | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

53: Av. Dr. Moraes Salles & Retorno

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 563 | 2 | 565 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.00 |
| Stops (#) | 0 | 2 | 2 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 23 | 0 | 23 |
| Fuel Consumed (l) | 2 | 0 | 2 |
| Fuel Economy (km/l) | 10.5 | NA | 10.3 |
| CO Emissions (kg) | 0.04 | 0.00 | 0.04 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1078 | 1447 | 2525 |
| Control Delay / Veh (s/v) | 32 | 57 | 47 |
| Queue Delay / Veh (s/v) | 0 | 308 | 177 |
| Total Delay / Veh (s/v) | 32 | 366 | 223 |
| Total Delay (hr) | 10 | 147 | 157 |
| Stops / Veh | 0.82 | 0.89 | 0.86 |
| Stops (#) | 882 | 1285 | 2167 |
| Average Speed (km/hr) | 4 | 1 | 1 |
| Total Travel Time (hr) | 10 | 149 | 159 |
| Distance Traveled (km) | 44 | 85 | 128 |
| Fuel Consumed (l) | 51 | 444 | 495 |
| Fuel Economy (km/l) | 0.9 | 0.2 | 0.3 |
| CO Emissions (kg) | 0.94 | 8.26 | 9.20 |
| NOx Emissions (kg) | 0.18 | 1.59 | 1.78 |
| VOC Emissions (kg) | 0.22 | 1.91 | 2.12 |
| Unserviced Vehicles (#) | 0 | 36 | 36 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

56: Rua Barão de Paranapanema & Acesso

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 33 | 214 | 247 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.87 |
| Stops (#) | 0 | 214 | 214 |
| Average Speed (km/hr) | 50 | 49 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 2 | 7 | 9 |
| Fuel Consumed (l) | 0 | 5 | 6 |
| Fuel Economy (km/l) | NA | 1.3 | 1.6 |
| CO Emissions (kg) | 0.00 | 0.10 | 0.10 |
| NOx Emissions (kg) | 0.00 | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.00 | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

59: Av. Princesa D'Oeste & retorno

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 1115 | 1115 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 3 | 3 |
| Distance Traveled (km) | 143 | 143 |
| Fuel Consumed (l) | 14 | 14 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.25 | 0.25 |
| NOx Emissions (kg) | 0.05 | 0.05 |
| VOC Emissions (kg) | 0.06 | 0.06 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

61: Av. Princesa D'Oeste & retorno

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 34 | 866 | 900 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 34 | 0 | 34 |
| Average Speed (km/hr) | 49 | 50 | 49 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 1 | 19 | 20 |
| Fuel Consumed (l) | 1 | 2 | 3 |
| Fuel Economy (km/l) | NA | 10.5 | 7.5 |
| CO Emissions (kg) | 0.02 | 0.03 | 0.05 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.00 | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 602 | 923 | 1525 |
| Control Delay / Veh (s/v) | 31 | 9 | 18 |
| Queue Delay / Veh (s/v) | 651 | 3 | 259 |
| Total Delay / Veh (s/v) | 682 | 12 | 276 |
| Total Delay (hr) | 114 | 3 | 117 |
| Stops / Veh | 0.88 | 0.49 | 0.64 |
| Stops (#) | 528 | 454 | 982 |
| Average Speed (km/hr) | 0 | 15 | 1 |
| Total Travel Time (hr) | 114 | 4 | 119 |
| Distance Traveled (km) | 22 | 63 | 85 |
| Fuel Consumed (l) | 330 | 25 | 354 |
| Fuel Economy (km/l) | 0.1 | 2.6 | 0.2 |
| CO Emissions (kg) | 6.13 | 0.46 | 6.59 |
| NOx Emissions (kg) | 1.18 | 0.09 | 1.27 |
| VOC Emissions (kg) | 1.41 | 0.11 | 1.52 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

63: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1364 | 457 | 1821 |
| Control Delay / Veh (s/v) | 14 | 20 | 16 |
| Queue Delay / Veh (s/v) | 280 | 0 | 210 |
| Total Delay / Veh (s/v) | 295 | 20 | 226 |
| Total Delay (hr) | 112 | 3 | 114 |
| Stops / Veh | 0.65 | 0.72 | 0.67 |
| Stops (#) | 892 | 328 | 1220 |
| Average Speed (km/hr) | 0 | 5 | 1 |
| Total Travel Time (hr) | 113 | 3 | 116 |
| Distance Traveled (km) | 54 | 14 | 69 |
| Fuel Consumed (l) | 335 | 16 | 351 |
| Fuel Economy (km/l) | 0.2 | 0.9 | 0.2 |
| CO Emissions (kg) | 6.23 | 0.30 | 6.52 |
| NOx Emissions (kg) | 1.20 | 0.06 | 1.26 |
| VOC Emissions (kg) | 1.44 | 0.07 | 1.50 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

64: Av. Dr. Moraes Salles & R. Antônio A. de Camargo

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 376 | 11 | 387 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.03 |
| Stops (#) | 0 | 11 | 11 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 23 | 1 | 24 |
| Fuel Consumed (l) | 2 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 9.5 |
| CO Emissions (kg) | 0.04 | 0.01 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

66: Av. José de Souza Campos

| Direction | NB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1554 | 1915 | 3469 |
| Control Delay / Veh (s/v) | 15 | 471 | 266 |
| Queue Delay / Veh (s/v) | 184 | 230 | 210 |
| Total Delay / Veh (s/v) | 199 | 701 | 476 |
| Total Delay (hr) | 86 | 373 | 459 |
| Stops / Veh | 0.66 | 0.71 | 0.69 |
| Stops (#) | 1033 | 1364 | 2397 |
| Average Speed (km/hr) | 1 | 0 | 0 |
| Total Travel Time (hr) | 87 | 374 | 462 |
| Distance Traveled (km) | 64 | 76 | 139 |
| Fuel Consumed (l) | 267 | 1071 | 1338 |
| Fuel Economy (km/l) | 0.2 | 0.1 | 0.1 |
| CO Emissions (kg) | 4.97 | 19.91 | 24.88 |
| NOx Emissions (kg) | 0.96 | 3.84 | 4.80 |
| VOC Emissions (kg) | 1.15 | 4.59 | 5.74 |
| Unserviced Vehicles (#) | 0 | 951 | 951 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | SB | All |
|------------------------------|------|------|------|-------|
| Volume (vph) | 2076 | 2537 | 764 | 5377 |
| Control Delay / Veh (s/v) | 29 | 34 | 43 | 33 |
| Queue Delay / Veh (s/v) | 0 | 192 | 0 | 90 |
| Total Delay / Veh (s/v) | 29 | 225 | 43 | 124 |
| Total Delay (hr) | 17 | 159 | 9 | 185 |
| Stops / Veh | 0.78 | 0.85 | 0.88 | 0.83 |
| Stops (#) | 1623 | 2166 | 672 | 4461 |
| Average Speed (km/hr) | 16 | 1 | 5 | 3 |
| Total Travel Time (hr) | 25 | 162 | 10 | 197 |
| Distance Traveled (km) | 406 | 149 | 48 | 603 |
| Fuel Consumed (l) | 122 | 503 | 45 | 670 |
| Fuel Economy (km/l) | 3.3 | 0.3 | 1.1 | 0.9 |
| CO Emissions (kg) | 2.27 | 9.35 | 0.84 | 12.46 |
| NOx Emissions (kg) | 0.44 | 1.81 | 0.16 | 2.41 |
| VOC Emissions (kg) | 0.52 | 2.16 | 0.19 | 2.87 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

71: Av. Guarani & Av. Dr. Moraes Salles

| Direction | EB | WB | NB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 1713 | 2680 | 444 | 4837 |
| Control Delay / Veh (s/v) | 0 | 0 | 116 | 11 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 116 | 11 |
| Total Delay (hr) | 0 | 0 | 14 | 14 |
| Stops / Veh | 0.00 | 0.00 | 1.00 | 0.09 |
| Stops (#) | 0 | 0 | 444 | 444 |
| Average Speed (km/hr) | 50 | 50 | 3 | 24 |
| Total Travel Time (hr) | 2 | 10 | 15 | 28 |
| Distance Traveled (km) | 105 | 524 | 38 | 668 |
| Fuel Consumed (l) | 10 | 50 | 53 | 113 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 0.7 | 5.9 |
| CO Emissions (kg) | 0.19 | 0.93 | 0.99 | 2.10 |
| NOx Emissions (kg) | 0.04 | 0.18 | 0.19 | 0.41 |
| VOC Emissions (kg) | 0.04 | 0.21 | 0.23 | 0.49 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

Network Totals

| | |
|------------------------------|--------|
| Number of Intersections | 36 |
| Control Delay / Veh (s/v) | 48 |
| Queue Delay / Veh (s/v) | 66 |
| Total Delay / Veh (s/v) | 114 |
| Total Delay (hr) | 2219 |
| Stops / Veh | 0.53 |
| Stops (#) | 37124 |
| Average Speed (km/hr) | 3 |
| Total Travel Time (hr) | 2369 |
| Distance Traveled (km) | 7497 |
| Fuel Consumed (l) | 7692 |
| Fuel Economy (km/l) | 1.0 |
| CO Emissions (kg) | 143.06 |
| NOx Emissions (kg) | 27.61 |
| VOC Emissions (kg) | 33.00 |
| Unserved Vehicles (#) | 2804 |
| Vehicles in dilemma zone (#) | 0 |
| Performance Index | 2322.1 |

Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↗↗ | ↕↗ | | | |
| Volume (vph) | 0 | 563 | 602 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.939 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2787 | 3323 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2787 | 3323 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 612 | 803 | 549 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 612 | 1352 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 59.2% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016






| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 204 | 471 | 34 | 198 | 426 | 16 | 14 | 44 | 24 | 15 | 73 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.989 | | | 0.995 | | | 0.961 | | | 0.925 | |
| Flt Protected | | 0.985 | | | 0.985 | | | 0.982 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3342 | 0 | 0 | 3310 | 0 | 0 | 3160 | 0 | 0 | 3161 | 0 |
| Flt Permitted | | 0.985 | | | 0.985 | | | 0.720 | | | 0.909 | |
| Satd. Flow (perm) | 0 | 3342 | 0 | 0 | 3310 | 0 | 0 | 2317 | 0 | 0 | 2884 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 101.8 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.82 | 0.95 | 0.57 | 0.77 | 0.79 | 0.54 | 0.25 | 0.79 | 0.60 | 0.54 | 0.54 | 0.49 |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 249 | 496 | 60 | 257 | 539 | 30 | 56 | 56 | 40 | 28 | 135 | 161 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 805 | 0 | 0 | 826 | 0 | 0 | 152 | 0 | 0 | 324 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 24.0 | 24.0 | 0.0 | 26.0 | 26.0 | 0.0 | 13.0 | 13.0 | 0.0 | 13.0 | 13.0 | 0.0 |
| Total Split (%) | 38.1% | 38.1% | 0.0% | 41.3% | 41.3% | 0.0% | 20.6% | 20.6% | 0.0% | 20.6% | 20.6% | 0.0% |
| Maximum Green (s) | 18.0 | 18.0 | | 20.0 | 20.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 4.0 | 6.0 | 6.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 18.0 | | | 20.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.32 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 0.84 | | | 0.79 | | | 0.52 | | | 0.89 | |
| Control Delay | | 31.4 | | | 26.3 | | | 32.6 | | | 55.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 31.4 | | | 26.3 | | | 32.6 | | | 55.6 | |
| LOS | | C | | | C | | | C | | | E | |
| Approach Delay | | 31.4 | | | 26.3 | | | 32.6 | | | 55.6 | |
| Approach LOS | | C | | | C | | | C | | | E | |

Intersection Summary

Area Type: Other
 Cycle Length: 63
 Actuated Cycle Length: 63
 Offset: 24 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 33.2 Intersection LOS: C
 Intersection Capacity Utilization 64.5% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| | | |
|--|--|--|
|  Ø2 13 s |  Ø3 26 s |  Ø4 24 s |
|  Ø6 13 s | | |

Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1875 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.991 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4939 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4939 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2038 | 134 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2172 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.3% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 423 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 1269 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.985 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.982 | |
| Satd. Flow (prot) | 0 | 3418 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4744 | 0 |
| Flt Permitted | | | | | | | | | | | 0.982 | |
| Satd. Flow (perm) | 0 | 3418 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4744 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 0.78 | 0.61 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.91 | 0.92 |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 542 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 803 | 1395 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 604 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2198 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 23.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 | 84.0 | 0.0 |
| Total Split (%) | 0.0% | 21.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 78.5% | 78.5% | 0.0% |
| Maximum Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Actuated g/C Ratio | | 0.15 | | | | | | | | 0.74 | 0.74 | |
| v/c Ratio | | 1.18 | | | | | | | | 0.63 | 0.63 | |
| Control Delay | | 141.1 | | | | | | | | 7.8 | 7.8 | |
| Queue Delay | | 0.0 | | | | | | | | 97.0 | 97.0 | |
| Total Delay | | 141.1 | | | | | | | | 104.8 | 104.8 | |
| LOS | | F | | | | | | | | F | F | |
| Approach Delay | | 141.1 | | | | | | | | 104.8 | 104.8 | |
| Approach LOS | | F | | | | | | | | F | F | |

Intersection Summary

Area Type: Other

Cycle Length: 107

Actuated Cycle Length: 107

Offset: 58 (54%), Referenced to phase 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 1.18

Intersection Signal Delay: 112.6

Intersection LOS: F

Intersection Capacity Utilization 59.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1879 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.952 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4874 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4874 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.89 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2042 | 958 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3000 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 0.0 | 23.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 77.0 | 0.0 |
| Total Split (%) | 0.0% | 23.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 77.0% | 0.0% |
| Maximum Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Actuated g/C Ratio | | 0.16 | | | | | | | | | 0.72 | |
| v/c Ratio | | 0.79 | | | | | | | | | 0.85 | |
| Control Delay | | 52.2 | | | | | | | | | 13.5 | |
| Queue Delay | | 0.0 | | | | | | | | | 100.4 | |
| Total Delay | | 52.2 | | | | | | | | | 113.9 | |
| LOS | | D | | | | | | | | | F | |
| Approach Delay | | 52.2 | | | | | | | | | 113.9 | |
| Approach LOS | | D | | | | | | | | | F | |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 58 (58%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 106.1

Intersection LOS: F

Intersection Capacity Utilization 76.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



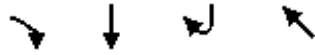
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 303 | 1868 | 7 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Fr _t | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1596 | 5131 | 0 | 3505 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1596 | 5131 | 0 | 3505 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.87 | 0.44 | 0.88 |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 316 | 2147 | 16 | 431 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 316 | 2163 | 0 | 431 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | 0.0 | 65.0 | 0.0 | 37.0 |
| Total Split (%) | 0.0% | 63.7% | 0.0% | 36.3% |
| Maximum Green (s) | | 60.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 102.0 | 60.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.59 | | 0.31 |
| v/c Ratio | 0.20 | 0.72 | | 0.39 |
| Control Delay | 0.3 | 16.7 | | 28.7 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.3 | 16.7 | | 28.7 |
| LOS | A | B | | C |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------|------|------|------|------|
| Approach Delay | | 16.7 | | 28.7 |
| Approach LOS | | B | | C |

Intersection Summary

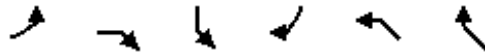
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 102 |
| Actuated Cycle Length: | 102 |
| Offset: | 58 (57%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 16.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 55.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

06/05/2016






| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|--------|------|
| Lane Configurations | | | | | | | |
| Volume (vph) | 1644 | 0 | 0 | 0 | 0 | 1884 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | 0.850 | |
| Fl _t Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3467 | 0 | 0 | 0 | 0 | 3573 | |
| Fl _t Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3467 | 0 | 0 | 0 | 0 | 3573 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.86 | 0.92 | 0.92 | 0.92 | 0.92 | 0.67 | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 1912 | 0 | 0 | 0 | 0 | 2812 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 1912 | 0 | 0 | 0 | 0 | 2812 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | NA | | | | | custom | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | 2 | |
| Minimum Split (s) | 22.0 | | | | | 22.0 | 22.0 |
| Total Split (s) | 65.0 | 0.0 | 0.0 | 0.0 | 0.0 | 43.0 | 65.0 |
| Total Split (%) | 60.2% | 0.0% | 0.0% | 0.0% | 0.0% | 39.8% | 60% |
| Maximum Green (s) | 59.0 | | | | | 37.0 | 59.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 | 0 |
| Act Effct Green (s) | 59.0 | | | | | 37.0 | |
| Actuated g/C Ratio | 0.55 | | | | | 0.34 | |
| v/c Ratio | 1.01 | | | | | 2.30 | |
| Control Delay | 48.2 | | | | | 607.9 | |
| Queue Delay | 0.0 | | | | | 0.0 | |
| Total Delay | 48.2 | | | | | 607.9 | |
| LOS | D | | | | | F | |
| Approach Delay | 48.2 | | | | | | |
| Approach LOS | D | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 108
 Actuated Cycle Length: 108
 Offset: 0 (0%), Referenced to phase 4:EBL and 8:Ped, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.30
 Intersection Signal Delay: 381.4
 Intersection Capacity Utilization 100.8%
 Analysis Period (min) 15

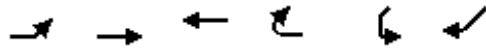
Intersection LOS: F
 ICU Level of Service G

Splits and Phases: 7: Av. Princesa D'Oeste

| | |
|---|---|
|  ø2 43 s |  ø4 65 s |
| |  ø8 65 s |

Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 405 | 461 | 0 | 0 | 0 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1717 | 1807 | 0 | 0 | 0 | 2703 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1717 | 1807 | 0 | 0 | 0 | 2703 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.93 | 0.65 | 0.92 | 0.92 | 0.92 | 0.89 |
| Adj. Flow (vph) | 435 | 709 | 0 | 0 | 0 | 958 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 435 | 709 | 0 | 0 | 0 | 958 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 33.2% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 159 | 241 | 15 | 112 | 304 | 38 | 11 | 166 | 163 | 15 | 284 | 362 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | 0.985 | | | 0.938 | | | 0.926 | |
| Flt Protected | | 0.981 | | | 0.986 | | | 0.997 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1700 | 0 | 0 | 1709 | 0 | 0 | 1707 | 0 | 0 | 1671 | 0 |
| Flt Permitted | | 0.981 | | | 0.986 | | | 0.997 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1700 | 0 | 0 | 1709 | 0 | 0 | 1707 | 0 | 0 | 1671 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 125.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 9.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.72 | 0.88 | 0.59 | 0.50 | 0.81 | 0.86 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 173 | 262 | 16 | 156 | 345 | 64 | 22 | 205 | 190 | 16 | 309 | 393 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 451 | 0 | 0 | 565 | 0 | 0 | 417 | 0 | 0 | 718 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 86.6% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 457 | 639 | 640 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.929 | |
| Flt Protected | | | | | 0.974 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1667 | 3320 | 0 |
| Flt Permitted | | | | | 0.974 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1667 | 3320 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.78 | 0.78 | 0.88 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 586 | 819 | 727 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 586 | 1546 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.98 | 0.98 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

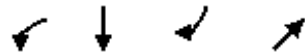
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

05/05/2016



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 323 | 2802 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.995 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3467 | 5008 | 0 | 4879 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3467 | 5008 | 0 | 4879 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.93 | 0.90 | 0.67 | 0.95 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 347 | 3113 | 103 | 1201 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 347 | 3216 | 0 | 1201 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.03 | 1.03 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 55.0 | 50.0 | 0.0 | 49.0 |
| Total Split (%) | 52.4% | 47.6% | 0.0% | 46.7% |
| Maximum Green (s) | 51.0 | 44.0 | | 44.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 51.0 | 44.0 | | 50.0 |
| Actuated g/C Ratio | 0.49 | 0.42 | | 0.48 |
| v/c Ratio | 0.21 | 1.53 | | 0.52 |
| Control Delay | 15.8 | 268.5 | | 20.1 |
| Queue Delay | 174.7 | 0.0 | | 141.6 |
| Total Delay | 190.5 | 268.5 | | 161.7 |
| LOS | F | F | | F |
| Approach Delay | | 268.5 | | 161.7 |
| Approach LOS | | F | | F |

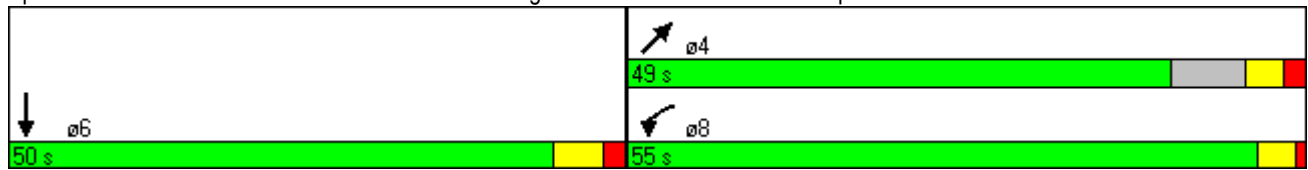
Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green, Master Intersection
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.53
 Intersection Signal Delay: 235.9
 Intersection LOS: F
 Intersection Capacity Utilization 99.4%
 ICU Level of Service F
 Analysis Period (min) 15

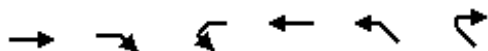
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



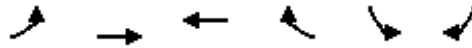
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 758 | 338 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.944 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3353 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3353 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.89 | 0.67 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 852 | 504 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1356 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 35.1% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 1845 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 1845 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.56 | 0.96 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 132 | 316 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 132 | 316 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 386 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2677 | 1805 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2677 | 1805 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.56 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 439 | 132 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 439 | 132 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↔ | | | | | | ↕↕↕ | | | | |
| Volume (vph) | 105 | 928 | 0 | 0 | 0 | 0 | 0 | 799 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frnt | | | | | | | | 0.970 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3522 | 0 | 0 | 0 | 0 | 0 | 4742 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3522 | 0 | 0 | 0 | 0 | 0 | 4742 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.80 | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.88 | 0.78 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 131 | 1221 | 0 | 0 | 0 | 0 | 0 | 908 | 229 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1352 | 0 | 0 | 0 | 0 | 0 | 1137 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 23.0 | 23.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 43.4% | 43.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 56.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 25.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 25.0 | | | | |
| Actuated g/C Ratio | | 0.30 | | | | | | 0.47 | | | | |
| v/c Ratio | | 1.27 | | | | | | 0.51 | | | | |
| Control Delay | | 151.7 | | | | | | 10.7 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 151.7 | | | | | | 10.7 | | | | |
| LOS | | F | | | | | | B | | | | |
| Approach Delay | | 151.7 | | | | | | 10.7 | | | | |
| Approach LOS | | F | | | | | | B | | | | |

Intersection Summary

Area Type: Other

Cycle Length: 53

Actuated Cycle Length: 53

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 87.3

Intersection LOS: F

Intersection Capacity Utilization 58.1%

ICU Level of Service B

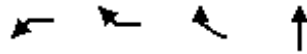
Analysis Period (min) 15

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

06/05/2016

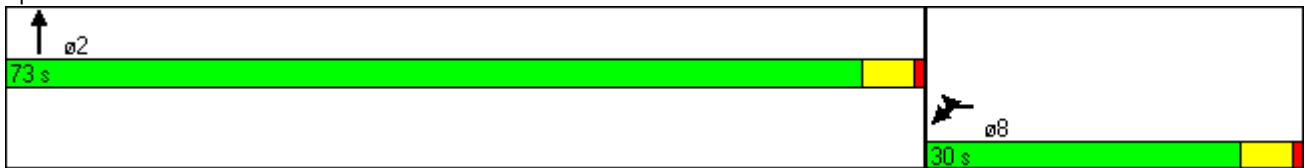


| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 561 | 379 | 225 | 1309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.956 | 0.850 | | |
| Flt Protected | 0.966 | | | |
| Satd. Flow (prot) | 3351 | 1418 | 0 | 5136 |
| Flt Permitted | 0.966 | | | |
| Satd. Flow (perm) | 3351 | 1418 | 0 | 5136 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.85 | 0.88 | 0.82 | 0.86 |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 660 | 431 | 274 | 1522 |
| Shared Lane Traffic (%) | | 63% | | |
| Lane Group Flow (vph) | 932 | 433 | 0 | 1522 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | NA | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 30.0 | 30.0 | 0.0 | 73.0 |
| Total Split (%) | 29.1% | 29.1% | 0.0% | 70.9% |
| Maximum Green (s) | 25.0 | 25.0 | | 68.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 25.0 | 25.0 | | 68.0 |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.66 |
| v/c Ratio | 1.15 | 1.26 | | 0.45 |
| Control Delay | 116.7 | 172.6 | | 9.0 |
| Queue Delay | 0.0 | 0.0 | | 34.4 |
| Total Delay | 116.7 | 172.6 | | 43.4 |
| LOS | F | F | | D |
| Approach Delay | 134.4 | | | 43.4 |
| Approach LOS | F | | | D |

Intersection Summary

Area Type: Other
Cycle Length: 103
Actuated Cycle Length: 103
Offset: 2 (2%), Referenced to phase 2:NBT, Start of Green
Natural Cycle: 45
Control Type: Pretimed
Maximum v/c Ratio: 1.26
Intersection Signal Delay: 86.4 Intersection LOS: F
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1644 | 1998 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3398 | 5033 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3398 | 5033 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.86 | 0.90 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1912 | 2220 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1912 | 2220 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 98.0 | 98.0 | 8.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 92.5% | 92.5% | 8% |
| Maximum Green (s) | | | | | 92.0 | 92.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 92.0 | 92.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.65 | 0.51 | |
| Control Delay | | | | | 3.3 | 2.1 | |
| Queue Delay | | | | | 7.4 | 2.3 | |
| Total Delay | | | | | 10.7 | 4.4 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------|-----|-----|-----|-----|-----|-----|-----|
| LOS | | | | | B | A | |
| Approach Delay | | | | | | 7.3 | |
| Approach LOS | | | | | | A | |

Intersection Summary

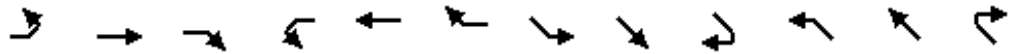
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 5 (5%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.65 |
| Intersection Signal Delay: | 7.3 |
| Intersection Capacity Utilization | 58.8% |
| Analysis Period (min) | 15 |
| | Intersection LOS: A |
| | ICU Level of Service B |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 1767 | 0 | 0 | 1423 | 247 | 0 | 0 | 0 | 369 | 194 | 303 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.974 | | | | | | 0.947 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4885 | 0 | 0 | 4743 | 0 | 0 | 0 | 0 | 1805 | 1660 | 1490 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4885 | 0 | 0 | 4743 | 0 | 0 | 0 | 0 | 1805 | 1660 | 1490 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.92 | 0.80 | 0.92 | 0.92 | 0.85 | 0.71 | 0.92 | 0.92 | 0.92 | 0.81 | 0.84 | 0.67 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 3% | 3% |
| Adj. Flow (vph) | 0 | 2209 | 0 | 0 | 1674 | 348 | 0 | 0 | 0 | 456 | 231 | 452 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 28% |
| Lane Group Flow (vph) | 0 | 2209 | 0 | 0 | 2022 | 0 | 0 | 0 | 0 | 456 | 358 | 325 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 0.0 | 81.0 | 0.0 | 0.0 | 76.0 | 0.0 | 0.0 | 0.0 | 0.0 | 45.0 | 45.0 | 45.0 |
| Total Split (%) | 0.0% | 64.3% | 0.0% | 0.0% | 60.3% | 0.0% | 0.0% | 0.0% | 0.0% | 35.7% | 35.7% | 35.7% |
| Maximum Green (s) | | 76.0 | | | 72.0 | | | | | 40.0 | 40.0 | 40.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 76.0 | | | 77.0 | | | | | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | | 0.60 | | | 0.61 | | | | | 0.32 | 0.32 | 0.32 |
| v/c Ratio | | 0.75 | | | 0.70 | | | | | 0.80 | 0.68 | 0.69 |
| Control Delay | | 7.8 | | | 18.3 | | | | | 51.0 | 45.1 | 46.3 |
| Queue Delay | | 19.6 | | | 0.1 | | | | | 572.1 | 495.9 | 468.2 |
| Total Delay | | 27.4 | | | 18.3 | | | | | 623.1 | 541.1 | 514.5 |
| LOS | | C | | | B | | | | | F | F | F |
| Approach Delay | | 27.4 | | | 18.3 | | | | | | 566.3 | |
| Approach LOS | | C | | | B | | | | | | F | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

Intersection Summary

Area Type: Other

Cycle Length: 126

Actuated Cycle Length: 126

Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 138.3

Intersection LOS: F

Intersection Capacity Utilization 139.0%

ICU Level of Service H

Analysis Period (min) 15

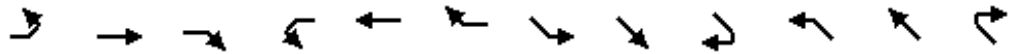
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | | ↕↕ | |
| Volume (vph) | 519 | 239 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 347 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.977 | |
| Flt Protected | | 0.967 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3467 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3421 | 0 |
| Flt Permitted | | 0.967 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3467 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3421 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.80 | 0.83 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.82 | 0.68 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 0% | 0% |
| Adj. Flow (vph) | 649 | 288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 423 | 78 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 937 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 501 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 106.0 | 106.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.0 | 0.0 |
| Total Split (%) | 82.8% | 82.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 17.2% | 0.0% |
| Maximum Green (s) | 102.0 | 102.0 | | | | | | | | | 17.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 102.0 | | | | | | | | | 17.0 | |
| Actuated g/C Ratio | | 0.80 | | | | | | | | | 0.13 | |
| v/c Ratio | | 0.34 | | | | | | | | | 1.10 | |
| Control Delay | | 4.0 | | | | | | | | | 124.0 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.0 | |
| Total Delay | | 4.0 | | | | | | | | | 124.0 | |
| LOS | | A | | | | | | | | | F | |
| Approach Delay | | 4.0 | | | | | | | | | 124.0 | |
| Approach LOS | | A | | | | | | | | | F | |

Intersection Summary

Area Type: Other

Cycle Length: 128

Actuated Cycle Length: 128

Offset: 44 (34%), Referenced to phase 4:EBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 45.8

Intersection LOS: D

Intersection Capacity Utilization 47.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
 37: Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1115 | 0 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3503 | 0 | 2758 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3503 | 0 | 2758 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 129.4 | 59.4 | |
| Travel Time (s) | 4.6 | | | 9.3 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.88 | 0.92 | 0.71 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1267 | 0 | 621 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1267 | 0 | 621 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

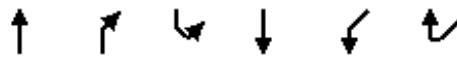
Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.2% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

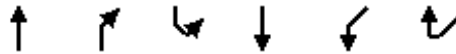


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑↓ | | | | | | |
| Volume (vph) | 2298 | 1230 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.941 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4765 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4765 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | No | | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | | 50 | |
| Link Distance (m) | 67.0 | | | 63.3 | | 63.4 | |
| Travel Time (s) | 4.8 | | | 4.6 | | 4.6 | |
| Peak Hour Factor | 0.94 | 0.77 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2445 | 1597 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4042 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 0.95 | 0.95 | |
| Turning Speed (k/h) | 15 | | 25 | | 25 | | 15 |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 98.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Total Split (%) | 92.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8% |
| Maximum Green (s) | 92.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 92.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.15dr | | | | | | |
| Control Delay | 16.7 | | | | | | |
| Queue Delay | 38.5 | | | | | | |
| Total Delay | 55.2 | | | | | | |
| LOS | E | | | | | | |
| Approach Delay | 55.2 | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|--------------|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | E | | | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 92 (87%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 55.2 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 76.9% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| | |
|--------------------|---------|
| ø10 ø2 98 s | 8 s |
|--------------------|---------|

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 323 | 259 | 0 | 2298 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.964 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3242 | 1440 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3242 | 1440 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.84 | 0.92 | 0.83 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 347 | 308 | 0 | 2769 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 35% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 455 | 200 | 0 | 2769 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | Perm | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 15.0 | 34.0 | 34.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 30.6% | 30.6% | 69.4% | 69.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 28.0 | 28.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 28.0 | | | | |
| Actuated g/C Ratio | | | | | 0.20 | 0.20 | | 0.57 | | | | |
| v/c Ratio | | | | | 0.69 | 0.68 | | 0.96 | | | | |
| Control Delay | | | | | 24.6 | 33.1 | | 22.0 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 153.1 | | | | |
| Total Delay | | | | | 24.6 | 33.1 | | 175.1 | | | | |
| LOS | | | | | C | C | | F | | | | |
| Approach Delay | | | | | 27.2 | | | 175.1 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

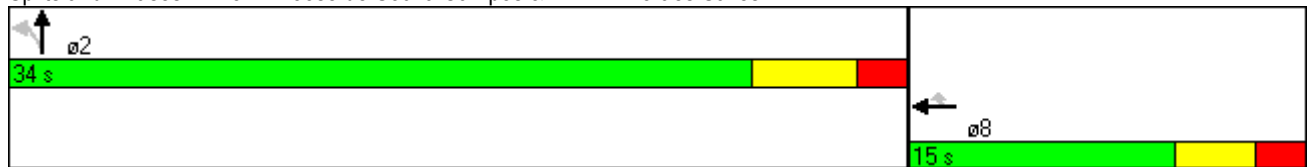


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | C | | | | | | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 49 |
| Actuated Cycle Length: | 49 |
| Offset: | 5 (10%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.96 |
| Intersection Signal Delay: | 146.8 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 76.9% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 732 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.935 | |
| Flt Protected | 0.950 | 0.988 | 0.950 | | |
| Satd. Flow (prot) | 1626 | 3383 | 1698 | 4542 | 0 |
| Flt Permitted | 0.950 | 0.988 | 0.950 | | |
| Satd. Flow (perm) | 1626 | 3383 | 1698 | 4542 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 218.5 | |
| Travel Time (s) | | 2.4 | | 15.7 | |
| Peak Hour Factor | 0.29 | 0.90 | 0.89 | 0.95 | 0.92 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 497 | 526 | 749 | 1049 | 796 |
| Shared Lane Traffic (%) | 33% | | | | |
| Lane Group Flow (vph) | 333 | 690 | 749 | 1845 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | 0.0 |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | 0.0% |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 1.06 | 1.06 | 0.59 | 0.54 | |
| Control Delay | 120.7 | 104.9 | 10.1 | 8.1 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 120.7 | 104.9 | 10.1 | 8.1 | |

Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------|-----|-------|-----|-----|-----|
| LOS | F | F | B | A | |
| Approach Delay | | 110.0 | | 8.7 | |
| Approach LOS | | F | | A | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 5 (4%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 37.3 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 56.7% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| | |
|-------|------|
| ø2 | ø4 |
| 109 s | 31 s |

Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 06/05/2016



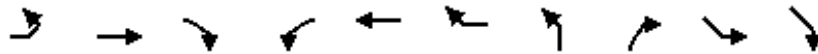
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1164 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.992 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 5050 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 5050 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.89 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1308 | 75 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1383 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 26.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coimbra



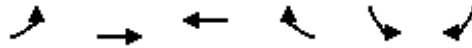
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1807 | 1551 | 3467 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1807 | 1551 | 3467 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.44 | 0.67 | 0.89 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 16 | 93 | 749 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 16 | 93 | 749 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 53: Av. Dr. Moraes Salles & Retorno

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 5036 | 0 | 0 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 5036 | 0 | 0 | 1805 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.44 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 670 | 0 | 0 | 16 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 670 | 0 | 0 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.7% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 26/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|--------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1164 | 0 | 0 | 2478 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.967 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3610 | 0 | 0 | 4878 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3610 | 0 | 0 | 4878 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.89 | 0.92 | 0.92 | 0.90 | 0.82 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1308 | 0 | 0 | 2753 | 789 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1308 | 0 | 0 | 3542 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | custom | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | 0.0 | 55.0 | 0.0 | 0.0 | 57.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 49.1% | 0.0% | 0.0% | 50.9% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 51.0 | | | 53.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 51.0 | | | 53.0 | | | |
| Actuated g/C Ratio | | 0.46 | | | 0.47 | | | |
| v/c Ratio | | 0.80 | | | 1.53 | | | |
| Control Delay | | 30.6 | | | 269.0 | | | |
| Queue Delay | | 0.0 | | | 176.1 | | | |
| Total Delay | | 30.6 | | | 445.0 | | | |
| LOS | | C | | | F | | | |
| Approach Delay | | | | | 445.0 | | | |
| Approach LOS | | | | | F | | | |

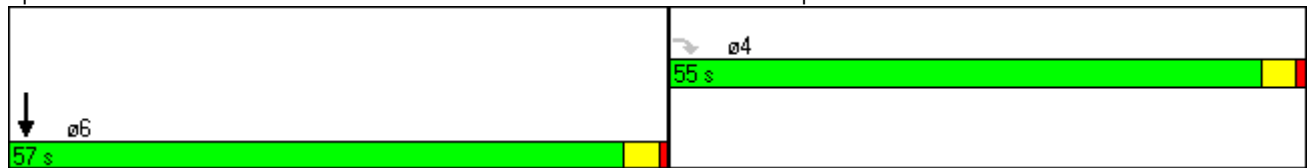
Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016

Intersection Summary

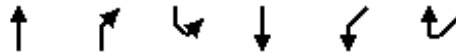
Area Type: Other
 Cycle Length: 112
 Actuated Cycle Length: 112
 Offset: 5 (4%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.53
 Intersection Signal Delay: 333.2 Intersection LOS: F
 Intersection Capacity Utilization 96.1% ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
 56: Rua Barão de Paranapanema & Acesso

06/05/2016

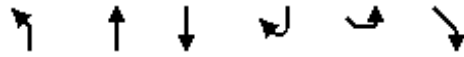


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.55 | 0.82 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 75 | 789 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 75 | 789 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.8% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 978 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.996 | | | | |
| Satd. Flow (prot) | 0 | 4819 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.996 | | | | |
| Satd. Flow (perm) | 0 | 4819 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 184.1 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.3 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.55 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 95 | 1075 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1170 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1307 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 141.1 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.2 | | | 1.6 |
| Peak Hour Factor | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 95 | 0 | 0 | 0 | 0 | 1436 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 95 | 0 | 0 | 0 | 0 | 1436 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↗↗↗ | | |
| Volume (vph) | 405 | 0 | 0 | 904 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Adj. Flow (vph) | 435 | 0 | 0 | 993 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 435 | 0 | 0 | 993 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | NA | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 23.0 | 0.0 | 0.0 | 84.0 | 0.0 | 0.0 |
| Total Split (%) | 21.5% | 0.0% | 0.0% | 78.5% | 0.0% | 0.0% |
| Maximum Green (s) | 16.0 | | | 79.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 16.0 | | | 79.0 | | |
| Actuated g/C Ratio | 0.15 | | | 0.74 | | |
| v/c Ratio | 0.85 | | | 0.26 | | |
| Control Delay | 60.8 | | | 4.8 | | |
| Queue Delay | 669.6 | | | 2.2 | | |
| Total Delay | 730.4 | | | 6.9 | | |
| LOS | F | | | A | | |
| Approach Delay | 730.4 | | | 6.9 | | |
| Approach LOS | F | | | A | | |

Intersection Summary

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016

Area Type: Other

Cycle Length: 107

Actuated Cycle Length: 107

Offset: 4 (4%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 227.3

Intersection LOS: F

Intersection Capacity Utilization 107.4%

ICU Level of Service G

Analysis Period (min) 15

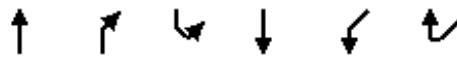
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 2171 | 561 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5136 | 3467 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5136 | 3467 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.87 | 0.85 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2495 | 660 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2495 | 660 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 73.0 | 37.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 66.4% | 33.6% | 0.0% |
| Maximum Green (s) | | | | 68.0 | 32.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 68.0 | 32.0 | |
| Actuated g/C Ratio | | | | 0.62 | 0.29 | |
| v/c Ratio | | | | 0.79 | 0.65 | |
| Control Delay | | | | 17.9 | 37.8 | |
| Queue Delay | | | | 224.3 | 0.0 | |
| Total Delay | | | | 242.2 | 37.8 | |
| LOS | | | | F | D | |
| Approach Delay | | | | 242.2 | 37.8 | |
| Approach LOS | | | | F | D | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 2 (2%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.79 |
| Intersection Signal Delay: | 199.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 66.3% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

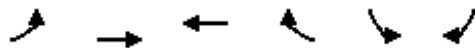
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 474 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.992 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3477 | 0 | 0 | 1644 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3477 | 0 | 0 | 1644 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.88 | 0.25 | 0.92 | 0.79 |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 539 | 32 | 0 | 137 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 571 | 0 | 0 | 137 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 26.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

06/05/2016

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|--------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 2557 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3574 | 0 | 0 | 0 | 0 | 3646 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3574 | 0 | 0 | 0 | 0 | 3646 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 1.00 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1201 | 0 | 0 | 0 | 0 | 2557 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1201 | 0 | 0 | 0 | 0 | 2557 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 55.0 | 0.0 | 0.0 | 0.0 | 0.0 | 34.0 |
| Total Split (%) | 61.8% | 0.0% | 0.0% | 0.0% | 0.0% | 38.2% |
| Maximum Green (s) | 51.0 | | | | | 28.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 51.0 | | | | | 28.0 |
| Actuated g/C Ratio | 0.57 | | | | | 0.31 |
| v/c Ratio | 0.59 | | | | | 2.23 |
| Control Delay | 13.7 | | | | | 577.0 |
| Queue Delay | 191.3 | | | | | 121.0 |
| Total Delay | 205.0 | | | | | 698.0 |
| LOS | F | | | | | F |
| Approach Delay | 205.0 | | | | | |
| Approach LOS | F | | | | | |

Intersection Summary

Area Type: Other
Cycle Length: 89
Actuated Cycle Length: 89
Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
Natural Cycle: 150
Control Type: Pretimed
Maximum v/c Ratio: 2.23
Intersection Signal Delay: 540.4 Intersection LOS: F
Intersection Capacity Utilization 99.5% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Maciel

09/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1581 | 445 | 0 | 1792 | 0 | 186 | 834 | 95 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3244 | 1398 | 0 | 4838 | 0 | 0 | 3398 | 1552 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3244 | 1398 | 0 | 4838 | 0 | 0 | 3398 | 1552 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.85 | 0.92 | 0.85 | 0.92 | 0.76 | 0.88 | 0.53 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1737 | 524 | 0 | 2108 | 0 | 245 | 948 | 179 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1789 | 472 | 0 | 2108 | 0 | 0 | 1193 | 179 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 76.0 | 76.0 | 0.0 | 81.0 | 0.0 | 45.0 | 45.0 | 45.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 60.3% | 60.3% | 0.0% | 64.3% | 0.0% | 35.7% | 35.7% | 35.7% | 0.0% | 0.0% |
| Maximum Green (s) | | 72.0 | 72.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 77.0 | 77.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Actuated g/C Ratio | | 0.61 | 0.61 | | 0.60 | | 0.32 | 0.32 | 0.32 | | |
| v/c Ratio | | 0.90 | 0.55 | | 0.72 | | 1.11 | 0.36 | 0.36 | | |
| Control Delay | | 29.1 | 17.5 | | 12.2 | | 101.5 | 35.8 | 35.8 | | |
| Queue Delay | | 6.6 | 0.0 | | 1.0 | | 45.2 | 0.0 | 0.0 | | |
| Total Delay | | 35.7 | 17.5 | | 13.3 | | 146.7 | 35.8 | 35.8 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

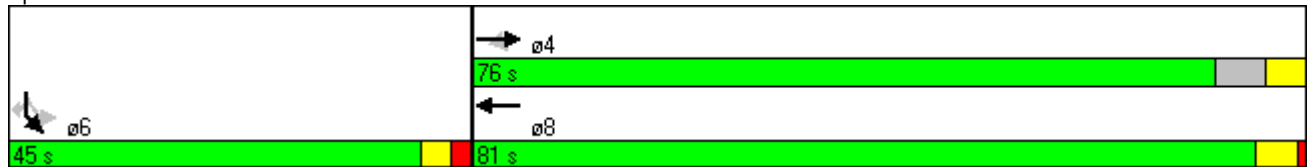


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------|-----|------|-----|-----|------|-----|------|-------|-----|-----|-----|
| LOS | | D | B | | B | | | F | D | | |
| Approach Delay | | 31.9 | | | 13.3 | | | 132.2 | | | |
| Approach LOS | | C | | | B | | | F | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 126 |
| Actuated Cycle Length: | 126 |
| Offset: | 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.11 |
| Intersection Signal Delay: | 49.0 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 139.0% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings
71: Av. Guarani & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Volume (vph) | 2073 | 117 | 0 | 1887 | 0 | 225 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 14% | | | 14% | 14% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.989 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4677 | 0 | 0 | 4638 | 0 | 1574 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4677 | 0 | 0 | 4638 | 0 | 1574 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 52.8 | | | 49.8 | 78.3 | |
| Travel Time (s) | 3.8 | | | 3.6 | 5.6 | |
| Peak Hour Factor | 0.93 | 0.69 | 0.92 | 0.85 | 0.92 | 0.88 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 2229 | 170 | 0 | 2220 | 0 | 256 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 2399 | 0 | 0 | 2220 | 0 | 256 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | R NA |
| Median Width(m) | 4.8 | | | 4.8 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.10 | 1.10 | 1.10 | 1.10 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.3% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Intersection

Intersection Delay (sec/veh) 23.2

Intersection LOS C

| Approach | EB | WB | NB | SB |
|------------------------------|-------|-------|-------|-------|
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 2 | 2 | 2 | 2 |
| Adjusted Approach Flow (vph) | 451 | 565 | 417 | 718 |
| Demand Flow Rate (pc/h) | 459 | 570 | 421 | 732 |
| Vehicles Circulating (pc/h) | 487 | 405 | 459 | 528 |
| Vehicles Exiting (pc/h) | 773 | 475 | 487 | 447 |
| Follow-Up Headway (s) | 3.186 | 3.186 | 3.186 | 3.186 |
| Ped Vol. Crossing Leg (#/hr) | 0 | 0 | 0 | 0 |
| Ped Capacity Adjustment | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay (sec/veh) | 13.3 | 15.8 | 11.6 | 42.0 |
| Approach LOS | B | C | B | E |

| Lane | Left | Left | Left | Left |
|-----------------------------|-------|-------|-------|-------|
| Designated moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| Right Turn Channelized | | | | |
| Lane Utilization | 1.000 | 1.000 | 1.000 | 1.000 |
| Critical Headway (s) | 4.113 | 4.113 | 4.113 | 4.113 |
| Entry Flow Rate (pc/h) | 459 | 570 | 421 | 732 |
| Capacity, Entry Lane (pc/h) | 804 | 851 | 819 | 781 |
| Entry HV Adjustment Factor | 0.982 | 0.990 | 0.990 | 0.981 |
| Flow Rate, Entry (vph) | 451 | 565 | 417 | 718 |
| Capacity, Entry (vph) | 789 | 843 | 812 | 766 |
| Volume to Capacity Ratio | 0.571 | 0.670 | 0.514 | 0.937 |
| Control Delay (sec/veh) | 13.3 | 15.8 | 11.6 | 42.0 |
| Level of Service | B | C | B | E |
| 95th-Percentile Queue (veh) | 4 | 5 | 3 | 14 |

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 563 | 1107 | 1670 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.34 |
| Stops (#) | 563 | 0 | 563 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 2 | 4 |
| Distance Traveled (km) | 103 | 121 | 224 |
| Fuel Consumed (l) | 22 | 11 | 34 |
| Fuel Economy (km/l) | 4.6 | 10.5 | 6.6 |
| CO Emissions (kg) | 0.42 | 0.21 | 0.63 |
| NOx Emissions (kg) | 0.08 | 0.04 | 0.12 |
| VOC Emissions (kg) | 0.10 | 0.05 | 0.15 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 710 | 640 | 82 | 167 | 1599 |
| Control Delay / Veh (s/v) | 31 | 26 | 33 | 56 | 32 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 31 | 26 | 33 | 56 | 32 |
| Total Delay (hr) | 6 | 5 | 1 | 3 | 14 |
| Stops / Veh | 0.86 | 0.85 | 0.91 | 0.86 | 0.86 |
| Stops (#) | 614 | 545 | 75 | 143 | 1377 |
| Average Speed (km/hr) | 15 | 25 | 8 | 6 | 18 |
| Total Travel Time (hr) | 9 | 9 | 1 | 3 | 22 |
| Distance Traveled (km) | 130 | 236 | 7 | 17 | 391 |
| Fuel Consumed (l) | 43 | 48 | 4 | 12 | 107 |
| Fuel Economy (km/l) | 3.0 | 5.0 | 1.6 | 1.4 | 3.6 |
| CO Emissions (kg) | 0.81 | 0.88 | 0.08 | 0.22 | 2.00 |
| NOx Emissions (kg) | 0.16 | 0.17 | 0.02 | 0.04 | 0.39 |
| VOC Emissions (kg) | 0.19 | 0.20 | 0.02 | 0.05 | 0.46 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

3: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 1998 | 1998 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 11 | 11 |
| Distance Traveled (km) | 566 | 566 |
| Fuel Consumed (l) | 54 | 54 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 1.00 | 1.00 |
| NOx Emissions (kg) | 0.19 | 0.19 |
| VOC Emissions (kg) | 0.23 | 0.23 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 461 | 1880 | 2341 |
| Control Delay / Veh (s/v) | 141 | 8 | 34 |
| Queue Delay / Veh (s/v) | 0 | 97 | 78 |
| Total Delay / Veh (s/v) | 141 | 105 | 112 |
| Total Delay (hr) | 18 | 55 | 73 |
| Stops / Veh | 0.83 | 0.45 | 0.52 |
| Stops (#) | 382 | 838 | 1220 |
| Average Speed (km/hr) | 1 | 2 | 1 |
| Total Travel Time (hr) | 19 | 56 | 75 |
| Distance Traveled (km) | 28 | 85 | 113 |
| Fuel Consumed (l) | 61 | 178 | 240 |
| Fuel Economy (km/l) | 0.5 | 0.5 | 0.5 |
| CO Emissions (kg) | 1.14 | 3.32 | 4.46 |
| NOx Emissions (kg) | 0.22 | 0.64 | 0.86 |
| VOC Emissions (kg) | 0.26 | 0.77 | 1.03 |
| Unserviced Vehicles (#) | 71 | 0 | 71 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 405 | 2731 | 3136 |
| Control Delay / Veh (s/v) | 52 | 13 | 18 |
| Queue Delay / Veh (s/v) | 0 | 100 | 87 |
| Total Delay / Veh (s/v) | 52 | 114 | 106 |
| Total Delay (hr) | 6 | 86 | 92 |
| Stops / Veh | 0.92 | 0.68 | 0.71 |
| Stops (#) | 371 | 1858 | 2229 |
| Average Speed (km/hr) | 4 | 2 | 2 |
| Total Travel Time (hr) | 6 | 90 | 97 |
| Distance Traveled (km) | 29 | 187 | 216 |
| Fuel Consumed (l) | 27 | 299 | 326 |
| Fuel Economy (km/l) | 1.1 | 0.6 | 0.7 |
| CO Emissions (kg) | 0.51 | 5.56 | 6.07 |
| NOx Emissions (kg) | 0.10 | 1.07 | 1.17 |
| VOC Emissions (kg) | 0.12 | 1.28 | 1.40 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

| Direction | EB | SB | NW | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 303 | 1875 | 379 | 2557 |
| Control Delay / Veh (s/v) | 0 | 17 | 29 | 17 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 17 | 29 | 17 |
| Total Delay (hr) | 0 | 9 | 3 | 12 |
| Stops / Veh | 0.00 | 0.67 | 0.76 | 0.61 |
| Stops (#) | 0 | 1264 | 288 | 1552 |
| Average Speed (km/hr) | 46 | 18 | 4 | 16 |
| Total Travel Time (hr) | 0 | 14 | 3 | 17 |
| Distance Traveled (km) | 11 | 249 | 12 | 272 |
| Fuel Consumed (l) | 1 | 76 | 16 | 93 |
| Fuel Economy (km/l) | 9.9 | 3.3 | 0.7 | 2.9 |
| CO Emissions (kg) | 0.02 | 1.41 | 0.30 | 1.73 |
| NOx Emissions (kg) | 0.00 | 0.27 | 0.06 | 0.33 |
| VOC Emissions (kg) | 0.00 | 0.33 | 0.07 | 0.40 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

7: Av. Princesa D'Oeste

| Direction | EB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1644 | 1884 | 3528 |
| Control Delay / Veh (s/v) | 48 | 608 | 347 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 48 | 608 | 347 |
| Total Delay (hr) | 22 | 318 | 340 |
| Stops / Veh | 0.86 | 0.67 | 0.76 |
| Stops (#) | 1418 | 1256 | 2674 |
| Average Speed (km/hr) | 2 | 3 | 2 |
| Total Travel Time (hr) | 23 | 335 | 358 |
| Distance Traveled (km) | 39 | 844 | 883 |
| Fuel Consumed (l) | 96 | 990 | 1086 |
| Fuel Economy (km/l) | 0.4 | 0.9 | 0.8 |
| CO Emissions (kg) | 1.79 | 18.41 | 20.20 |
| NOx Emissions (kg) | 0.35 | 3.55 | 3.90 |
| VOC Emissions (kg) | 0.41 | 4.25 | 4.66 |
| Unserviced Vehicles (#) | 15 | 1064 | 1079 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

8: Av. Ayrton Senna da Silva

| Direction | EB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 866 | 853 | 1719 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 79 | 61 | 140 |
| Fuel Consumed (l) | 8 | 6 | 13 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.14 | 0.11 | 0.25 |
| NOx Emissions (kg) | 0.03 | 0.02 | 0.05 |
| VOC Emissions (kg) | 0.03 | 0.02 | 0.06 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 415 | 454 | 340 | 661 | 1870 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Stops (#) | 415 | 454 | 340 | 661 | 1870 |
| Average Speed (km/hr) | 50 | 50 | 50 | 50 | 50 |
| Total Travel Time (hr) | 3 | 1 | 1 | 2 | 7 |
| Distance Traveled (km) | 153 | 56 | 41 | 83 | 332 |
| Fuel Consumed (l) | 24 | 15 | 12 | 23 | 73 |
| Fuel Economy (km/l) | 6.4 | 3.6 | 3.6 | 3.6 | 4.5 |
| CO Emissions (kg) | 0.44 | 0.29 | 0.21 | 0.42 | 1.37 |
| NOx Emissions (kg) | 0.09 | 0.06 | 0.04 | 0.08 | 0.26 |
| VOC Emissions (kg) | 0.10 | 0.07 | 0.05 | 0.10 | 0.32 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

| Direction | NB | SE | All |
|------------------------------|------|------|------|
| Volume (vph) | 457 | 1279 | 1736 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.26 |
| Stops (#) | 457 | 0 | 457 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 | 2 |
| Distance Traveled (km) | 61 | 52 | 112 |
| Fuel Consumed (l) | 16 | 5 | 21 |
| Fuel Economy (km/l) | 3.8 | 10.5 | 5.4 |
| CO Emissions (kg) | 0.30 | 0.09 | 0.39 |
| NOx Emissions (kg) | 0.06 | 0.02 | 0.08 |
| VOC Emissions (kg) | 0.07 | 0.02 | 0.09 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Direction | WB | SB | NE | All |
|------------------------------|------|-------|------|-------|
| Volume (vph) | 323 | 2871 | 1141 | 4335 |
| Control Delay / Veh (s/v) | 16 | 269 | 20 | 184 |
| Queue Delay / Veh (s/v) | 175 | 0 | 142 | 50 |
| Total Delay / Veh (s/v) | 190 | 269 | 162 | 235 |
| Total Delay (hr) | 17 | 214 | 51 | 282 |
| Stops / Veh | 0.55 | 0.73 | 0.66 | 0.70 |
| Stops (#) | 177 | 2092 | 758 | 3027 |
| Average Speed (km/hr) | 1 | 3 | 1 | 2 |
| Total Travel Time (hr) | 17 | 226 | 53 | 296 |
| Distance Traveled (km) | 11 | 587 | 72 | 670 |
| Fuel Consumed (l) | 52 | 696 | 166 | 914 |
| Fuel Economy (km/l) | 0.2 | 0.8 | 0.4 | 0.7 |
| CO Emissions (kg) | 0.97 | 12.94 | 3.08 | 17.00 |
| NOx Emissions (kg) | 0.19 | 2.50 | 0.60 | 3.28 |
| VOC Emissions (kg) | 0.22 | 2.99 | 0.71 | 3.92 |
| Unserviced Vehicles (#) | 0 | 997 | 0 | 997 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1096 | 1096 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 51 | 51 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 36 | 36 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.06 | 0.06 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

23: Rua Proença

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 377 | 377 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 36 | 36 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.06 | 0.06 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

24: Rua Barão de Paranapanema

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 386 | 74 | 460 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 13 | 2 | 15 |
| Fuel Consumed (l) | 1 | 0 | 1 |
| Fuel Economy (km/l) | 10.5 | NA | 10.5 |
| CO Emissions (kg) | 0.02 | 0.00 | 0.03 |
| NOx Emissions (kg) | 0.00 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

25: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1033 | 978 | 2011 |
| Control Delay / Veh (s/v) | 152 | 11 | 83 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 152 | 11 | 83 |
| Total Delay (hr) | 44 | 3 | 46 |
| Stops / Veh | 0.82 | 0.63 | 0.73 |
| Stops (#) | 847 | 621 | 1468 |
| Average Speed (km/hr) | 1 | 8 | 1 |
| Total Travel Time (hr) | 44 | 3 | 48 |
| Distance Traveled (km) | 33 | 27 | 59 |
| Fuel Consumed (l) | 143 | 25 | 167 |
| Fuel Economy (km/l) | 0.2 | 1.1 | 0.4 |
| CO Emissions (kg) | 2.65 | 0.46 | 3.11 |
| NOx Emissions (kg) | 0.51 | 0.09 | 0.60 |
| VOC Emissions (kg) | 0.61 | 0.11 | 0.72 |
| Unserviced Vehicles (#) | 221 | 0 | 221 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

26: Rua Conde D'Eu & Av. Princesa D'Oeste

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1165 | 1309 | 2474 |
| Control Delay / Veh (s/v) | 134 | 9 | 68 |
| Queue Delay / Veh (s/v) | 0 | 34 | 18 |
| Total Delay / Veh (s/v) | 134 | 43 | 86 |
| Total Delay (hr) | 43 | 16 | 59 |
| Stops / Veh | 0.83 | 0.45 | 0.63 |
| Stops (#) | 964 | 585 | 1549 |
| Average Speed (km/hr) | 3 | 5 | 3 |
| Total Travel Time (hr) | 46 | 18 | 64 |
| Distance Traveled (km) | 126 | 90 | 216 |
| Fuel Consumed (l) | 154 | 65 | 219 |
| Fuel Economy (km/l) | 0.8 | 1.4 | 1.0 |
| CO Emissions (kg) | 2.86 | 1.21 | 4.08 |
| NOx Emissions (kg) | 0.55 | 0.23 | 0.79 |
| VOC Emissions (kg) | 0.66 | 0.28 | 0.94 |
| Unserviced Vehicles (#) | 177 | 0 | 177 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

28: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 3642 | 3642 |
| Control Delay / Veh (s/v) | 3 | 3 |
| Queue Delay / Veh (s/v) | 5 | 5 |
| Total Delay / Veh (s/v) | 7 | 7 |
| Total Delay (hr) | 7 | 7 |
| Stops / Veh | 0.22 | 0.22 |
| Stops (#) | 791 | 791 |
| Average Speed (km/hr) | 22 | 22 |
| Total Travel Time (hr) | 13 | 13 |
| Distance Traveled (km) | 299 | 299 |
| Fuel Consumed (l) | 67 | 67 |
| Fuel Economy (km/l) | 4.5 | 4.5 |
| CO Emissions (kg) | 1.24 | 1.24 |
| NOx Emissions (kg) | 0.24 | 0.24 |
| VOC Emissions (kg) | 0.29 | 0.29 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

| Direction | EB | WB | NW | All |
|------------------------------|------|------|------|-------|
| Volume (vph) | 1767 | 1670 | 866 | 4303 |
| Control Delay / Veh (s/v) | 8 | 18 | 48 | 20 |
| Queue Delay / Veh (s/v) | 20 | 0 | 521 | 113 |
| Total Delay / Veh (s/v) | 27 | 18 | 569 | 133 |
| Total Delay (hr) | 13 | 9 | 137 | 159 |
| Stops / Veh | 0.38 | 0.65 | 0.87 | 0.58 |
| Stops (#) | 678 | 1080 | 756 | 2514 |
| Average Speed (km/hr) | 7 | 22 | 0 | 3 |
| Total Travel Time (hr) | 16 | 15 | 138 | 168 |
| Distance Traveled (km) | 104 | 330 | 36 | 470 |
| Fuel Consumed (l) | 62 | 79 | 400 | 541 |
| Fuel Economy (km/l) | 1.7 | 4.2 | 0.1 | 0.9 |
| CO Emissions (kg) | 1.16 | 1.47 | 7.44 | 10.07 |
| NOx Emissions (kg) | 0.22 | 0.28 | 1.44 | 1.94 |
| VOC Emissions (kg) | 0.27 | 0.34 | 1.72 | 2.32 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 758 | 400 | 1158 |
| Control Delay / Veh (s/v) | 4 | 124 | 45 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 4 | 124 | 45 |
| Total Delay (hr) | 1 | 14 | 15 |
| Stops / Veh | 0.25 | 0.86 | 0.46 |
| Stops (#) | 189 | 343 | 532 |
| Average Speed (km/hr) | 16 | 2 | 3 |
| Total Travel Time (hr) | 1 | 14 | 16 |
| Distance Traveled (km) | 20 | 32 | 51 |
| Fuel Consumed (l) | 8 | 49 | 57 |
| Fuel Economy (km/l) | 2.3 | 0.7 | 0.9 |
| CO Emissions (kg) | 0.16 | 0.91 | 1.07 |
| NOx Emissions (kg) | 0.03 | 0.18 | 0.21 |
| VOC Emissions (kg) | 0.04 | 0.21 | 0.25 |
| Unserviced Vehicles (#) | 0 | 38 | 38 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

37: Av. Dr. Jesuino Marcondes Machado

| Direction | SB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1115 | 441 | 1556 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 3 | 1 | 3 |
| Distance Traveled (km) | 144 | 26 | 170 |
| Fuel Consumed (l) | 14 | 2 | 16 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.25 | 0.05 | 0.30 |
| NOx Emissions (kg) | 0.05 | 0.01 | 0.06 |
| VOC Emissions (kg) | 0.06 | 0.01 | 0.07 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 3528 | 3528 |
| Control Delay / Veh (s/v) | 17 | 17 |
| Queue Delay / Veh (s/v) | 38 | 38 |
| Total Delay / Veh (s/v) | 55 | 55 |
| Total Delay (hr) | 54 | 54 |
| Stops / Veh | 0.64 | 0.64 |
| Stops (#) | 2273 | 2273 |
| Average Speed (km/hr) | 4 | 4 |
| Total Travel Time (hr) | 59 | 59 |
| Distance Traveled (km) | 236 | 236 |
| Fuel Consumed (l) | 223 | 223 |
| Fuel Economy (km/l) | 1.1 | 1.1 |
| CO Emissions (kg) | 4.15 | 4.15 |
| NOx Emissions (kg) | 0.80 | 0.80 |
| VOC Emissions (kg) | 0.96 | 0.96 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 581 | 2298 | 2879 |
| Control Delay / Veh (s/v) | 27 | 22 | 23 |
| Queue Delay / Veh (s/v) | 0 | 153 | 122 |
| Total Delay / Veh (s/v) | 27 | 175 | 145 |
| Total Delay (hr) | 4 | 112 | 116 |
| Stops / Veh | 0.86 | 0.77 | 0.79 |
| Stops (#) | 500 | 1774 | 2274 |
| Average Speed (km/hr) | 8 | 1 | 2 |
| Total Travel Time (hr) | 5 | 115 | 120 |
| Distance Traveled (km) | 41 | 145 | 186 |
| Fuel Consumed (l) | 27 | 363 | 390 |
| Fuel Economy (km/l) | 1.5 | 0.4 | 0.5 |
| CO Emissions (kg) | 0.51 | 6.76 | 7.26 |
| NOx Emissions (kg) | 0.10 | 1.30 | 1.40 |
| VOC Emissions (kg) | 0.12 | 1.56 | 1.67 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| Direction | EB | NE | All |
|------------------------------|------|------|------|
| Volume (vph) | 618 | 2396 | 3014 |
| Control Delay / Veh (s/v) | 107 | 9 | 29 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 107 | 9 | 29 |
| Total Delay (hr) | 18 | 6 | 24 |
| Stops / Veh | 0.87 | 0.40 | 0.50 |
| Stops (#) | 540 | 959 | 1499 |
| Average Speed (km/hr) | 1 | 32 | 16 |
| Total Travel Time (hr) | 19 | 16 | 35 |
| Distance Traveled (km) | 21 | 524 | 544 |
| Fuel Consumed (l) | 65 | 87 | 152 |
| Fuel Economy (km/l) | 0.3 | 6.0 | 3.6 |
| CO Emissions (kg) | 1.21 | 1.62 | 2.83 |
| NOx Emissions (kg) | 0.23 | 0.31 | 0.55 |
| VOC Emissions (kg) | 0.28 | 0.37 | 0.65 |
| Unserviced Vehicles (#) | 34 | 0 | 34 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1205 | 1205 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 48 | 48 |
| Fuel Consumed (l) | 5 | 5 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.08 | 0.08 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coutinho

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 69 | 667 | 736 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.09 |
| Stops (#) | 69 | 0 | 69 |
| Average Speed (km/hr) | 50 | 51 | 51 |
| Total Travel Time (hr) | 0 | 0 | 1 |
| Distance Traveled (km) | 4 | 23 | 26 |
| Fuel Consumed (l) | 2 | 2 | 4 |
| Fuel Economy (km/l) | 2.0 | 10.5 | 6.5 |
| CO Emissions (kg) | 0.04 | 0.04 | 0.08 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

53: Av. Dr. Moraes Salles & Retorno

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 610 | 7 | 617 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.01 |
| Stops (#) | 0 | 7 | 7 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 25 | 0 | 25 |
| Fuel Consumed (l) | 2 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 9.9 |
| CO Emissions (kg) | 0.04 | 0.00 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales

| Direction | EB | SB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1164 | 3125 | 4289 |
| Control Delay / Veh (s/v) | 31 | 269 | 204 |
| Queue Delay / Veh (s/v) | 0 | 176 | 128 |
| Total Delay / Veh (s/v) | 31 | 445 | 333 |
| Total Delay (hr) | 10 | 386 | 396 |
| Stops / Veh | 0.83 | 0.72 | 0.75 |
| Stops (#) | 965 | 2250 | 3215 |
| Average Speed (km/hr) | 4 | 0 | 1 |
| Total Travel Time (hr) | 11 | 390 | 401 |
| Distance Traveled (km) | 47 | 183 | 230 |
| Fuel Consumed (l) | 53 | 1138 | 1191 |
| Fuel Economy (km/l) | 0.9 | 0.2 | 0.2 |
| CO Emissions (kg) | 0.99 | 21.17 | 22.16 |
| NOx Emissions (kg) | 0.19 | 4.09 | 4.28 |
| VOC Emissions (kg) | 0.23 | 4.88 | 5.11 |
| Unserviced Vehicles (#) | 0 | 1089 | 1089 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

56: Rua Barão de Paranapanema & Acesso

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 41 | 647 | 688 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.94 |
| Stops (#) | 0 | 647 | 647 |
| Average Speed (km/hr) | 50 | 49 | 49 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 2 | 22 | 24 |
| Fuel Consumed (l) | 0 | 17 | 17 |
| Fuel Economy (km/l) | NA | 1.3 | 1.4 |
| CO Emissions (kg) | 0.00 | 0.31 | 0.31 |
| NOx Emissions (kg) | 0.00 | 0.06 | 0.06 |
| VOC Emissions (kg) | 0.00 | 0.07 | 0.07 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

59: Av. Princesa D'Oeste & retorno

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 1030 | 1030 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 4 | 4 |
| Distance Traveled (km) | 190 | 190 |
| Fuel Consumed (l) | 18 | 18 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.34 | 0.34 |
| NOx Emissions (kg) | 0.06 | 0.06 |
| VOC Emissions (kg) | 0.08 | 0.08 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

61: Av. Princesa D'Oeste & retorno

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 52 | 1307 | 1359 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 52 | 0 | 52 |
| Average Speed (km/hr) | 49 | 50 | 49 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 29 | 30 |
| Fuel Consumed (l) | 1 | 3 | 4 |
| Fuel Economy (km/l) | 1.3 | 10.5 | 7.5 |
| CO Emissions (kg) | 0.02 | 0.05 | 0.08 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 405 | 904 | 1309 |
| Control Delay / Veh (s/v) | 61 | 5 | 22 |
| Queue Delay / Veh (s/v) | 670 | 2 | 209 |
| Total Delay / Veh (s/v) | 730 | 7 | 231 |
| Total Delay (hr) | 82 | 2 | 84 |
| Stops / Veh | 0.92 | 0.29 | 0.49 |
| Stops (#) | 371 | 266 | 637 |
| Average Speed (km/hr) | 0 | 21 | 1 |
| Total Travel Time (hr) | 82 | 3 | 85 |
| Distance Traveled (km) | 15 | 61 | 76 |
| Fuel Consumed (l) | 237 | 17 | 254 |
| Fuel Economy (km/l) | 0.1 | 3.7 | 0.3 |
| CO Emissions (kg) | 4.41 | 0.31 | 4.72 |
| NOx Emissions (kg) | 0.85 | 0.06 | 0.91 |
| VOC Emissions (kg) | 1.02 | 0.07 | 1.09 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

63: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 2171 | 561 | 2732 |
| Control Delay / Veh (s/v) | 18 | 38 | 22 |
| Queue Delay / Veh (s/v) | 224 | 0 | 178 |
| Total Delay / Veh (s/v) | 242 | 38 | 200 |
| Total Delay (hr) | 146 | 6 | 152 |
| Stops / Veh | 0.70 | 0.85 | 0.74 |
| Stops (#) | 1530 | 479 | 2009 |
| Average Speed (km/hr) | 1 | 3 | 1 |
| Total Travel Time (hr) | 148 | 6 | 154 |
| Distance Traveled (km) | 86 | 18 | 104 |
| Fuel Consumed (l) | 447 | 29 | 476 |
| Fuel Economy (km/l) | 0.2 | 0.6 | 0.2 |
| CO Emissions (kg) | 8.32 | 0.53 | 8.85 |
| NOx Emissions (kg) | 1.61 | 0.10 | 1.71 |
| VOC Emissions (kg) | 1.92 | 0.12 | 2.04 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 482 | 108 | 590 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.18 |
| Stops (#) | 0 | 108 | 108 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 30 | 9 | 39 |
| Fuel Consumed (l) | 3 | 3 | 6 |
| Fuel Economy (km/l) | 10.5 | 2.9 | 6.4 |
| CO Emissions (kg) | 0.05 | 0.06 | 0.11 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.02 |
| VOC Emissions (kg) | 0.01 | 0.01 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

66: Av. José de Souza Campos

| Direction | NB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1141 | 2557 | 3698 |
| Control Delay / Veh (s/v) | 14 | 577 | 403 |
| Queue Delay / Veh (s/v) | 191 | 121 | 143 |
| Total Delay / Veh (s/v) | 205 | 698 | 546 |
| Total Delay (hr) | 65 | 496 | 561 |
| Stops / Veh | 0.61 | 0.71 | 0.68 |
| Stops (#) | 692 | 1826 | 2518 |
| Average Speed (km/hr) | 1 | 0 | 0 |
| Total Travel Time (hr) | 66 | 498 | 564 |
| Distance Traveled (km) | 47 | 101 | 148 |
| Fuel Consumed (l) | 200 | 1424 | 1624 |
| Fuel Economy (km/l) | 0.2 | 0.1 | 0.1 |
| CO Emissions (kg) | 3.72 | 26.48 | 30.20 |
| NOx Emissions (kg) | 0.72 | 5.11 | 5.83 |
| VOC Emissions (kg) | 0.86 | 6.11 | 6.97 |
| Unserviced Vehicles (#) | 0 | 1410 | 1410 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | SB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 2026 | 1792 | 1115 | 4933 |
| Control Delay / Veh (s/v) | 27 | 12 | 96 | 37 |
| Queue Delay / Veh (s/v) | 5 | 1 | 41 | 12 |
| Total Delay / Veh (s/v) | 32 | 13 | 137 | 49 |
| Total Delay (hr) | 18 | 7 | 43 | 67 |
| Stops / Veh | 0.77 | 0.70 | 0.86 | 0.77 |
| Stops (#) | 1561 | 1259 | 959 | 3779 |
| Average Speed (km/hr) | 15 | 12 | 2 | 7 |
| Total Travel Time (hr) | 26 | 9 | 44 | 79 |
| Distance Traveled (km) | 395 | 105 | 71 | 570 |
| Fuel Consumed (l) | 123 | 57 | 146 | 325 |
| Fuel Economy (km/l) | 3.2 | 1.9 | 0.5 | 1.8 |
| CO Emissions (kg) | 2.28 | 1.05 | 2.72 | 6.05 |
| NOx Emissions (kg) | 0.44 | 0.20 | 0.52 | 1.17 |
| VOC Emissions (kg) | 0.53 | 0.24 | 0.63 | 1.39 |
| Unserviced Vehicles (#) | 0 | 0 | 97 | 97 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

71: Av. Guarani & Av. Dr. Moraes Salles

| Direction | EB | WB | NB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 2190 | 1887 | 225 | 4302 |
| Control Delay / Veh (s/v) | 0 | 0 | 51 | 3 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 51 | 3 |
| Total Delay (hr) | 0 | 0 | 3 | 3 |
| Stops / Veh | 0.00 | 0.00 | 1.00 | 0.05 |
| Stops (#) | 0 | 0 | 225 | 225 |
| Average Speed (km/hr) | 50 | 50 | 5 | 38 |
| Total Travel Time (hr) | 2 | 7 | 4 | 13 |
| Distance Traveled (km) | 116 | 368 | 18 | 501 |
| Fuel Consumed (l) | 11 | 35 | 16 | 61 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 1.1 | 8.1 |
| CO Emissions (kg) | 0.20 | 0.65 | 0.29 | 1.14 |
| NOx Emissions (kg) | 0.04 | 0.13 | 0.06 | 0.22 |
| VOC Emissions (kg) | 0.05 | 0.15 | 0.07 | 0.26 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

Network Totals

| | |
|------------------------------|--------|
| Number of Intersections | 36 |
| Control Delay / Veh (s/v) | 70 |
| Queue Delay / Veh (s/v) | 45 |
| Total Delay / Veh (s/v) | 114 |
| Total Delay (hr) | 2558 |
| Stops / Veh | 0.51 |
| Stops (#) | 41135 |
| Average Speed (km/hr) | 3 |
| Total Travel Time (hr) | 2723 |
| Distance Traveled (km) | 8250 |
| Fuel Consumed (l) | 8791 |
| Fuel Economy (km/l) | 0.9 |
| CO Emissions (kg) | 163.52 |
| NOx Emissions (kg) | 31.56 |
| VOC Emissions (kg) | 37.71 |
| Unserved Vehicles (#) | 5213 |
| Vehicles in dilemma zone (#) | 0 |
| Performance Index | 2671.9 |

Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 740 | 697 | 457 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.953 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2787 | 3373 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2787 | 3373 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 100% | 116% | 116% |
| Adj. Flow (vph) | 0 | 804 | 1078 | 497 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 804 | 1575 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 73.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service D |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 507 | 611 | 20 | 111 | 599 | 19 | 29 | 138 | 17 | 23 | 102 | 138 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.994 | | | 0.996 | | | 0.980 | | | 0.929 | |
| Flt Protected | | 0.979 | | | 0.990 | | | 0.991 | | | 0.993 | |
| Satd. Flow (prot) | 0 | 3292 | 0 | 0 | 3361 | 0 | 0 | 3302 | 0 | 0 | 3180 | 0 |
| Flt Permitted | | 0.979 | | | 0.990 | | | 0.771 | | | 0.861 | |
| Satd. Flow (perm) | 0 | 3292 | 0 | 0 | 3361 | 0 | 0 | 2569 | 0 | 0 | 2758 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 86.2 | | | 101.9 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.42 | 0.66 | 0.84 | 0.69 | 0.81 | 0.81 | 0.61 | 0.40 | 0.70 | 0.76 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 100% | 116% | 100% | 116% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 551 | 694 | 55 | 195 | 713 | 28 | 42 | 170 | 32 | 58 | 146 | 182 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1300 | 0 | 0 | 936 | 0 | 0 | 244 | 0 | 0 | 386 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 19.0 | 19.0 | 0.0 | 23.0 | 23.0 | 0.0 | 13.0 | 13.0 | 0.0 | 13.0 | 13.0 | 0.0 |
| Total Split (%) | 34.5% | 34.5% | 0.0% | 41.8% | 41.8% | 0.0% | 23.6% | 23.6% | 0.0% | 23.6% | 23.6% | 0.0% |
| Maximum Green (s) | 13.0 | 13.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 4.0 | 6.0 | 6.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 13.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.24 | | | 0.31 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 1.67 | | | 0.90 | | | 0.65 | | | 0.96 | |
| Control Delay | | 329.5 | | | 32.6 | | | 32.1 | | | 64.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 329.5 | | | 32.6 | | | 32.1 | | | 64.4 | |
| LOS | | F | | | C | | | C | | | E | |
| Approach Delay | | 329.5 | | | 32.6 | | | 32.1 | | | 64.4 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016

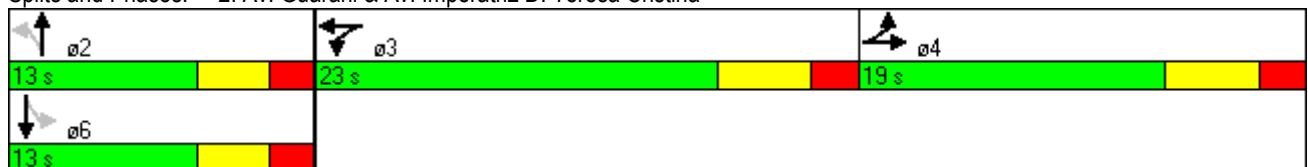


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | C | | | C | | | E | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 55 |
| Offset: | 45 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.67 |
| Intersection Signal Delay: | 171.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 84.9% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1649 | 141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.988 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4924 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4924 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 100% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1792 | 153 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1945 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 550 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 727 | 988 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.974 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.979 | |
| Satd. Flow (prot) | 0 | 3355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4957 | 0 |
| Flt Permitted | | | | | | | | | | | 0.979 | |
| Satd. Flow (perm) | 0 | 3355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4957 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 0.65 | 0.48 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.86 | 0.91 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 846 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 845 | 1086 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1931 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | 0.0 | 28.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.0 | 42.0 | 0.0 |
| Total Split (%) | 0.0% | 40.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 60.0% | 60.0% | 0.0% |
| Maximum Green (s) | | 21.0 | | | | | | | | 37.0 | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 1.02 | | | | | | | | | 0.91dl | |
| Control Delay | | 60.2 | | | | | | | | | 3.2 | |
| Queue Delay | | 0.0 | | | | | | | | | 20.3 | |
| Total Delay | | 60.2 | | | | | | | | | 23.5 | |
| LOS | | E | | | | | | | | | C | |
| Approach Delay | | 60.2 | | | | | | | | | 23.5 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016

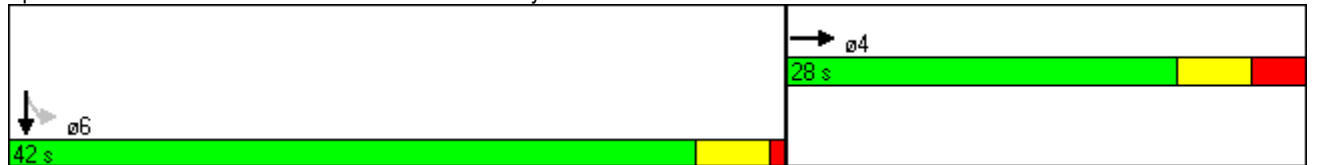


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | E | | | | | | | | | | C | |

Intersection Summary

| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.02 |
| Intersection Signal Delay: | 36.2 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 68.3% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| dl Defacto Left Lane. Recode with 1 though lane as a left lane. | |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 726 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1715 | 762 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.949 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4842 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4842 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.81 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1805 | 941 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2746 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 0.0 | 28.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.0 | 0.0 |
| Total Split (%) | 0.0% | 40.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 60.0% | 0.0% |
| Maximum Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.80 | | | | | | | | | 1.09dr | |
| Control Delay | | 29.9 | | | | | | | | | 59.9 | |
| Queue Delay | | 0.0 | | | | | | | | | 184.5 | |
| Total Delay | | 29.9 | | | | | | | | | 244.4 | |
| LOS | | C | | | | | | | | | F | |
| Approach Delay | | 29.9 | | | | | | | | | 244.4 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | C | | | | | | | | | | F | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 80 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.07 |
| Intersection Signal Delay: | 194.8 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 80.2% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |
| dr Defacto Right Lane. Recode with 1 though lane as a right lane. | |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



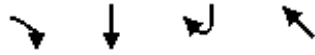
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 179 | 1645 | 4 | 570 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1644 | 5081 | 0 | 3505 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1644 | 5081 | 0 | 3505 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.76 | 0.84 | 0.50 | 0.84 |
| Growth Factor | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 273 | 1958 | 9 | 679 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 273 | 1967 | 0 | 679 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | 0.0 | 35.0 | 0.0 | 37.0 |
| Total Split (%) | 0.0% | 48.6% | 0.0% | 51.4% |
| Maximum Green (s) | | 30.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 72.0 | 30.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.42 | | 0.44 |
| v/c Ratio | 0.17 | 0.93 | | 0.44 |
| Control Delay | 0.2 | 29.7 | | 14.9 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.2 | 29.7 | | 14.9 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

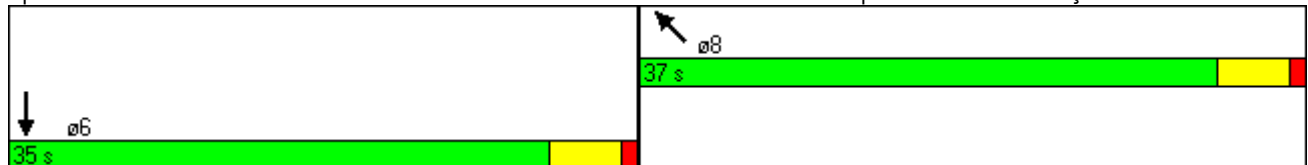


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------|------|------|------|------|
| LOS | A | C | | B |
| Approach Delay | | 29.7 | | 14.9 |
| Approach LOS | | C | | B |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 72 |
| Actuated Cycle Length: | 72 |
| Offset: | 58 (81%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.93 |
| Intersection Signal Delay: | 23.5 |
| Intersection Capacity Utilization | 56.0% |
| Analysis Period (min) | 15 |
| Intersection LOS: | C |
| ICU Level of Service | B |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



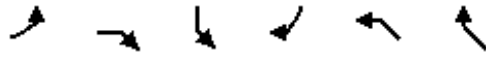
Lanes, Volumes, Timings

7: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|---------|
| Lane Configurations | ↖ ↗ | | | | | ↖ ↗ ↘ ↙ |
| Volume (vph) | 1170 | 0 | 0 | 0 | 0 | 2070 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3367 | 0 | 0 | 0 | 0 | 3538 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3367 | 0 | 0 | 0 | 0 | 3538 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.71 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1648 | 0 | 0 | 0 | 0 | 2226 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1648 | 0 | 0 | 0 | 0 | 2226 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 64.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40.0 |
| Total Split (%) | 61.5% | 0.0% | 0.0% | 0.0% | 0.0% | 38.5% |
| Maximum Green (s) | 58.0 | | | | | 34.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 58.0 | | | | | 34.0 |
| Actuated g/C Ratio | 0.56 | | | | | 0.33 |
| v/c Ratio | 0.88 | | | | | 1.92 |
| Control Delay | 23.8 | | | | | 443.4 |
| Queue Delay | 182.9 | | | | | 187.6 |
| Total Delay | 206.7 | | | | | 631.0 |
| LOS | F | | | | | F |
| Approach Delay | 206.7 | | | | | |



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|--------------|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | |

Intersection Summary

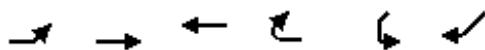
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.92 |
| Intersection Signal Delay: | 450.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 92.9% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 726 | 637 | 0 | 0 | 0 | 762 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1717 | 1807 | 0 | 0 | 0 | 2814 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1717 | 1807 | 0 | 0 | 0 | 2814 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.88 | 0.65 | 0.92 | 0.92 | 0.92 | 0.81 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 825 | 980 | 0 | 0 | 0 | 941 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 825 | 980 | 0 | 0 | 0 | 941 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 226 | 319 | 7 | 71 | 222 | 29 | 5 | 265 | 236 | 26 | 191 | 373 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | | | 0.981 | | | 0.943 | | | 0.921 | |
| Flt Protected | | 0.977 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1756 | 0 | 0 | 1767 | 0 | 0 | 1798 | 0 | 0 | 1730 | 0 |
| Flt Permitted | | 0.977 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1756 | 0 | 0 | 1767 | 0 | 0 | 1798 | 0 | 0 | 1730 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 170.9 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 12.3 | |
| Peak Hour Factor | 0.72 | 0.95 | 0.58 | 0.72 | 0.82 | 0.54 | 0.42 | 0.74 | 0.88 | 0.75 | 0.88 | 0.91 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 314 | 336 | 14 | 114 | 271 | 62 | 14 | 415 | 311 | 40 | 252 | 410 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 664 | 0 | 0 | 447 | 0 | 0 | 740 | 0 | 0 | 702 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 112.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 537 | 428 | 659 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.922 | |
| Flt Protected | | | | | 0.977 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1634 | 3272 | 0 |
| Flt Permitted | | | | | 0.977 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1634 | 3272 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 132.8 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.89 | 0.72 | 0.87 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 603 | 690 | 757 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 603 | 1447 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.98 | 0.98 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

05/05/2016



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 317 | 1466 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.993 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3467 | 4847 | 0 | 4879 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3467 | 4847 | 0 | 4879 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 195.5 | | 63.1 |
| Travel Time (s) | | 14.1 | | 4.5 |
| Peak Hour Factor | 0.76 | 0.84 | 0.38 | 0.95 |
| Growth Factor | 100% | 100% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 417 | 1745 | 89 | 1898 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 417 | 1834 | 0 | 1898 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.03 | 1.03 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 59.0 | 46.0 | 0.0 | 53.0 |
| Total Split (%) | 56.2% | 43.8% | 0.0% | 50.5% |
| Maximum Green (s) | 55.0 | 40.0 | | 48.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 55.0 | 40.0 | | 54.0 |
| Actuated g/C Ratio | 0.52 | 0.38 | | 0.51 |
| v/c Ratio | 0.23 | 0.99 | | 0.76 |
| Control Delay | 13.9 | 52.4 | | 22.7 |
| Queue Delay | 171.5 | 0.0 | | 220.5 |
| Total Delay | 185.5 | 52.4 | | 243.2 |
| LOS | F | D | | F |
| Approach Delay | | 52.4 | | 243.2 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

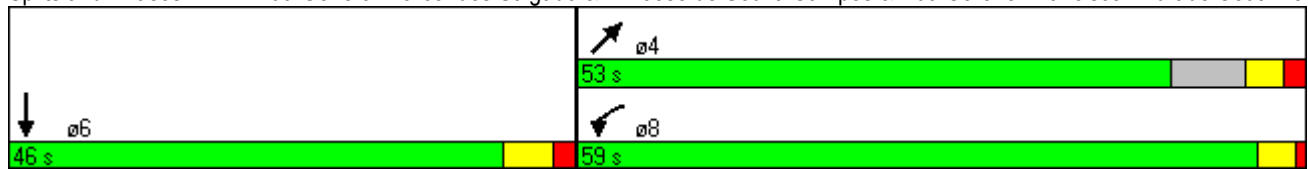


| Lane Group | WBL2 | SBT | SBR2 | NET |
|--------------|------|-----|------|-----|
| Approach LOS | | D | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 105 |
| Actuated Cycle Length: | 105 |
| Offset: | 50 (48%), Referenced to phase 4:NET and 8:WBL, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.99 |
| Intersection Signal Delay: | 153.1 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 85.4% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

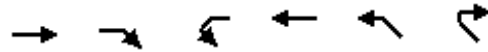
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 822 | 182 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.955 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.92 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Adj. Flow (vph) | 893 | 384 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1277 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | | | | | | |
|-----------------------------------|--------------|--|--|------------------------|--|--|
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 32.8% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
23: Rua Proença

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1787 | 1900 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1787 | 1900 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.63 | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 166 | 273 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 166 | 273 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 575 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2677 | 1787 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2677 | 1787 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.84 | 0.63 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 685 | 166 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 685 | 166 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↕↕ | | | | | | ↕↕↕ | | | | |
| Volume (vph) | 274 | 1004 | 0 | 0 | 0 | 0 | 0 | 1260 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.971 | | | | |
| Flt Protected | | 0.988 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3497 | 0 | 0 | 0 | 0 | 0 | 4682 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.988 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3497 | 0 | 0 | 0 | 0 | 0 | 4682 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.62 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 | 0.78 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 442 | 1339 | 0 | 0 | 0 | 0 | 0 | 1385 | 336 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1781 | 0 | 0 | 0 | 0 | 0 | 1721 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 21.0 | 21.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 58.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 26.6% | 26.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 73.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 53.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 53.0 | | | | |
| Actuated g/C Ratio | | 0.20 | | | | | | 0.67 | | | | |
| v/c Ratio | | 2.52 | | | | | | 0.55 | | | | |
| Control Delay | | 705.5 | | | | | | 7.6 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 705.5 | | | | | | 7.6 | | | | |
| LOS | | F | | | | | | A | | | | |
| Approach Delay | | 705.5 | | | | | | 7.6 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | | A | | | | | |

Intersection Summary

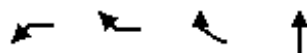
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 79 |
| Actuated Cycle Length: | 79 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.52 |
| Intersection Signal Delay: | 362.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 74.2% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

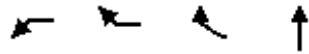


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 624 | 570 | 355 | 2260 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.938 | 0.850 | | |
| Flt Protected | 0.972 | | | |
| Satd. Flow (prot) | 3281 | 1419 | 0 | 5085 |
| Flt Permitted | 0.972 | | | |
| Satd. Flow (perm) | 3281 | 1419 | 0 | 5085 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.88 | 0.84 | 0.91 | 0.92 |
| Growth Factor | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 709 | 679 | 390 | 2457 |
| Shared Lane Traffic (%) | | 74% | | |
| Lane Group Flow (vph) | 1211 | 567 | 0 | 2457 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | NA | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 43.0 | 43.0 | 0.0 | 30.0 |
| Total Split (%) | 58.9% | 58.9% | 0.0% | 41.1% |
| Maximum Green (s) | 38.0 | 38.0 | | 25.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 38.0 | 38.0 | | 25.0 |
| Actuated g/C Ratio | 0.52 | 0.52 | | 0.34 |
| v/c Ratio | 0.71 | 0.77 | | 1.41 |
| Control Delay | 16.2 | 22.9 | | 213.0 |
| Queue Delay | 0.0 | 0.0 | | 247.2 |
| Total Delay | 16.2 | 22.9 | | 460.1 |
| LOS | B | C | | F |
| Approach Delay | 18.3 | | | 460.1 |



| Lane Group | WBL | WBR | WBR2 | NBT |
|--------------|-----|-----|------|-----|
| Approach LOS | B | | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 73 |
| Actuated Cycle Length: | 73 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.41 |
| Intersection Signal Delay: | 274.6 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 91.6% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↶↷ | ↕↕↕ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1170 | 1790 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3300 | 4888 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3300 | 4888 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.71 | 0.84 | |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 100% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1648 | 2131 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1648 | 2131 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 96.0 | 96.0 | 8.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 92.3% | 92.3% | 8% |
| Maximum Green (s) | | | | | 90.0 | 90.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 90.0 | 90.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.58 | 0.50 | |
| Control Delay | | | | | 2.8 | 2.1 | |
| Queue Delay | | | | | 4.3 | 2.1 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------|-----|-----|-----|-----|-----|-----|-----|
| Total Delay | | | | | 7.1 | 4.2 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 5.5 | |
| Approach LOS | | | | | | A | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.58 |
| Intersection Signal Delay: | 5.5 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 63.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↙ | ↘ | ↗ | | |
| Volume (vph) | 0 | 2109 | 0 | 0 | 1952 | 282 | 715 | 321 | 252 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Flt | | | | | 0.980 | | | 0.986 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.957 | | | |
| Satd. Flow (prot) | 0 | 4792 | 0 | 0 | 4793 | 0 | 1787 | 1724 | 1475 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.957 | | | |
| Satd. Flow (perm) | 0 | 4792 | 0 | 0 | 4793 | 0 | 1787 | 1724 | 1475 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.85 | 0.78 | 0.55 | 0.88 | 0.77 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 100% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 3% | 2% | 1% | 4% | 4% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2318 | 0 | 0 | 2664 | 419 | 1300 | 365 | 380 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 2318 | 0 | 0 | 3083 | 0 | 1300 | 403 | 342 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 73.0 | 0.0 | 0.0 | 68.0 | 0.0 | 37.0 | 37.0 | 37.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 66.4% | 0.0% | 0.0% | 61.8% | 0.0% | 33.6% | 33.6% | 33.6% | 0.0% | 0.0% |
| Maximum Green (s) | | 68.0 | | | 64.0 | | 32.0 | 32.0 | 32.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 68.0 | | | 69.0 | | 32.0 | 32.0 | 32.0 | | |
| Actuated g/C Ratio | | 0.62 | | | 0.63 | | 0.29 | 0.29 | 0.29 | | |
| v/c Ratio | | 0.78 | | | 1.03 | | 2.50 | 0.80 | 0.80 | | |
| Control Delay | | 18.0 | | | 44.5 | | 701.4 | 49.8 | 51.4 | | |
| Queue Delay | | 164.5 | | | 0.0 | | 0.0 | 670.8 | 670.3 | | |
| Total Delay | | 182.5 | | | 44.5 | | 701.4 | 720.6 | 721.7 | | |
| LOS | | F | | | D | | F | F | F | | |
| Approach Delay | | 182.5 | | | 44.5 | | | 708.6 | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

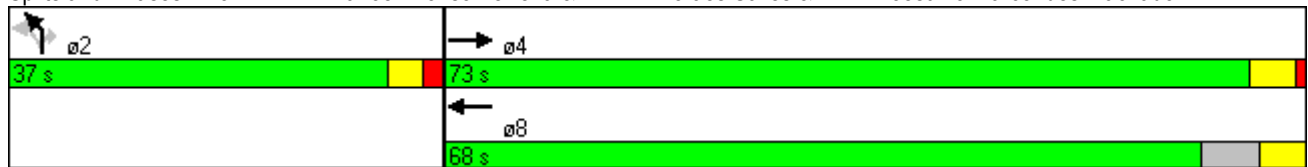


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|--------------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|
| Approach LOS | F | | | D | | | F | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.50 |
| Intersection Signal Delay: | 269.8 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 166.3% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|------|--------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | ↕↕ | |
| Volume (vph) | 560 | 226 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 662 | 54 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.973 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3444 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2703 | 0 |
| Flt Permitted | | 0.973 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3444 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2703 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 85.2 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 6.1 | | |
| Peak Hour Factor | 0.84 | 0.49 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.64 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Adj. Flow (vph) | 667 | 535 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 835 | 98 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 933 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | custom | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 85.0 | 85.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.0 | 0.0 |
| Total Split (%) | 76.6% | 76.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 23.4% | 0.0% |
| Maximum Green (s) | 81.0 | 81.0 | | | | | | | | 22.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 81.0 | | | | | | | | 22.0 | |
| Actuated g/C Ratio | | 0.73 | | | | | | | | 0.20 | |
| v/c Ratio | | 0.48 | | | | | | | | 1.74 | |
| Control Delay | | 7.0 | | | | | | | | 370.4 | |
| Queue Delay | | 0.0 | | | | | | | | 0.0 | |
| Total Delay | | 7.0 | | | | | | | | 370.4 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 7.0 | | | | | | | | | |
| Approach LOS | | A | | | | | | | | | |

Intersection Summary

Area Type: Other

Cycle Length: 111

Actuated Cycle Length: 111

Offset: 46 (41%), Referenced to phase 4:EBTL, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 1.74

Intersection Signal Delay: 165.8

Intersection LOS: F

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1003 | 0 | 648 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3503 | 0 | 2731 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3503 | 0 | 2731 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 203.0 | 59.4 | |
| Travel Time (s) | 4.6 | | | 14.6 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.87 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1153 | 0 | 704 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1153 | 0 | 704 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

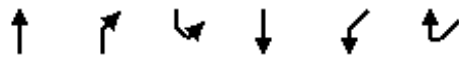
Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.1% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

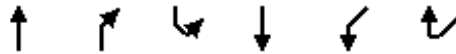


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 2115 | 1126 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.936 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4672 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4672 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | No | | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.83 | 0.60 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2548 | 1877 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4425 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 0.95 | 0.95 | |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 96.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Total Split (%) | 92.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8% |
| Maximum Green (s) | 90.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 90.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.39dr | | | | | | |
| Control Delay | 57.0 | | | | | | |
| Queue Delay | 144.6 | | | | | | |
| Total Delay | 201.6 | | | | | | |
| LOS | F | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------|-------|-----|-----|-----|-----|-----|-----|
| Approach Delay | 201.6 | | | | | | |
| Approach LOS | F | | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 32 (31%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.09 |
| Intersection Signal Delay: | 201.6 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 71.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↑ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 317 | 123 | 0 | 2115 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.990 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3337 | 1419 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3337 | 1419 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.65 | 0.92 | 0.83 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 417 | 220 | 0 | 2548 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 13% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 446 | 191 | 0 | 2548 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.02 | 1.02 | 1.02 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | Perm | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 15.0 | 30.0 | 30.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 33.3% | 33.3% | 66.7% | 66.7% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 24.0 | 24.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 24.0 | | | | |
| Actuated g/C Ratio | | | | | 0.22 | 0.22 | | 0.53 | | | | |
| v/c Ratio | | | | | 0.60 | 0.61 | | 0.95 | | | | |
| Control Delay | | | | | 19.7 | 26.3 | | 20.8 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 151.3 | | | | |
| Total Delay | | | | | 19.7 | 26.3 | | 172.1 | | | | |
| LOS | | | | | B | C | | F | | | | |
| Approach Delay | | | | | 21.7 | | | 172.1 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

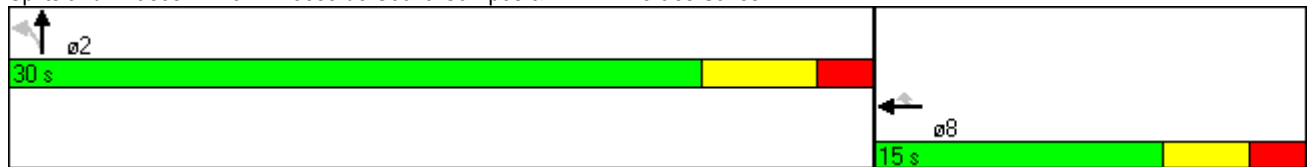


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | C | | | | | | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 45 |
| Offset: | 5 (11%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 142.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 71.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|--------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 1016 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.940 | |
| Flt Protected | 0.950 | 0.997 | 0.950 | | |
| Satd. Flow (prot) | 1595 | 3347 | 1715 | 4568 | 0 |
| Flt Permitted | 0.950 | 0.997 | 0.950 | | |
| Satd. Flow (perm) | 1595 | 3347 | 1715 | 4568 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 214.7 | |
| Travel Time (s) | | 2.4 | | 15.5 | |
| Peak Hour Factor | 0.79 | 0.91 | 0.66 | 0.95 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 263 | 492 | 1216 | 1679 | 1104 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 237 | 518 | 1216 | 2783 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | 0.0 |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | 0.0% |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.77 | 0.80 | 0.95 | 0.98dr | |
| Control Delay | 71.0 | 64.5 | 31.3 | 13.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------|------|------|------|------|-----|
| Total Delay | 71.0 | 64.5 | 31.3 | 13.7 | |
| LOS | E | E | C | B | |
| Approach Delay | 66.5 | | 19.1 | | |
| Approach LOS | E | | B | | |

Intersection Summary

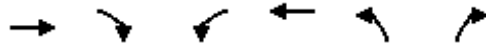
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 24 (17%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 26.6 Intersection LOS: C
 Intersection Capacity Utilization 72.6% ICU Level of Service C
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 06/05/2016



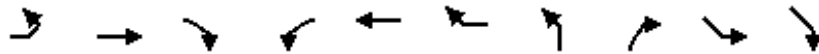
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↓ | | | | | |
| Volume (vph) | 1425 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.994 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 5012 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 5012 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.53 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1638 | 72 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1710 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coimbra



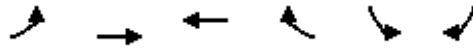
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1807 | 1464 | 3502 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1807 | 1464 | 3502 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.25 | 0.38 | 0.95 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 9 | 82 | 845 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 9 | 82 | 845 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 53: Av. Dr. Moraes Salles & Retorno

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↓ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 5036 | 0 | 0 | 1770 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 5036 | 0 | 0 | 1770 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.25 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 718 | 0 | 0 | 9 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 718 | 0 | 0 | 9 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|--------|------|------|--------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1425 | 0 | 0 | 1535 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.947 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3575 | 0 | 0 | 4692 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3575 | 0 | 0 | 4692 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.87 | 0.92 | 0.92 | 0.84 | 0.25 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1638 | 0 | 0 | 1827 | 993 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1638 | 0 | 0 | 2820 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | custom | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | 0.0 | 59.0 | 0.0 | 0.0 | 63.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 48.4% | 0.0% | 0.0% | 51.6% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 55.0 | | | 59.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 55.0 | | | 59.0 | | | |
| Actuated g/C Ratio | | 0.45 | | | 0.48 | | | |
| v/c Ratio | | 1.02 | | | 1.27dr | | | |
| Control Delay | | 60.1 | | | 143.0 | | | |
| Queue Delay | | 0.0 | | | 255.8 | | | |
| Total Delay | | 60.1 | | | 398.8 | | | |
| LOS | | E | | | F | | | |
| Approach Delay | | | | | 398.8 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016

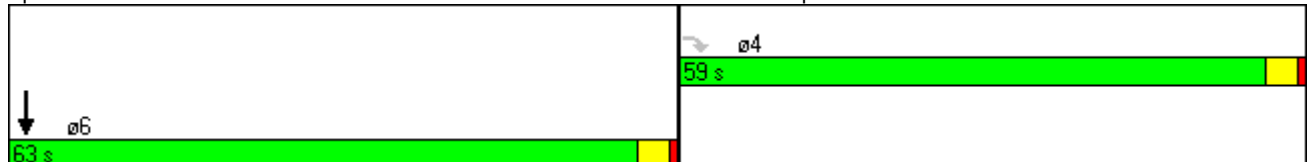


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 122
 Actuated Cycle Length: 122
 Offset: 112 (92%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 140
 Control Type: Pretimed
 Maximum v/c Ratio: 1.24
 Intersection Signal Delay: 274.4 Intersection LOS: F
 Intersection Capacity Utilization 75.1% ICU Level of Service D
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



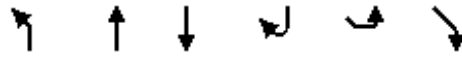
Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

06/05/2016

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↖ | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.53 | 0.25 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 72 | 993 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 72 | 993 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 23.8% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1522 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4825 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4825 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 165.7 | 27.3 | | 32.7 | |
| Travel Time (s) | | 11.9 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.67 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 59 | 1673 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1732 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 1075 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 116.7 | | | 22.0 |
| Travel Time (s) | 2.4 | | 8.4 | | | 1.6 |
| Peak Hour Factor | 0.67 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 59 | 0 | 0 | 0 | 0 | 1181 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 59 | 0 | 0 | 0 | 0 | 1181 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 726 | 0 | 0 | 1534 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.88 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 100% | 116% | 116% |
| Adj. Flow (vph) | 825 | 0 | 0 | 1686 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 825 | 0 | 0 | 1686 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | NA | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 28.0 | 0.0 | 0.0 | 49.0 | 0.0 | 0.0 |
| Total Split (%) | 36.4% | 0.0% | 0.0% | 63.6% | 0.0% | 0.0% |
| Maximum Green (s) | 21.0 | | | 44.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 21.0 | | | 44.0 | | |
| Actuated g/C Ratio | 0.27 | | | 0.57 | | |
| v/c Ratio | 0.88 | | | 0.58 | | |
| Control Delay | 39.7 | | | 11.6 | | |
| Queue Delay | 671.0 | | | 64.2 | | |
| Total Delay | 710.7 | | | 75.8 | | |
| LOS | F | | | E | | |
| Approach Delay | 710.7 | | | 75.8 | | |
| Approach LOS | F | | | E | | |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016

Intersection Summary

Area Type: Other

Cycle Length: 77

Actuated Cycle Length: 77

Offset: 4 (5%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 284.4

Intersection LOS: F

Intersection Capacity Utilization 132.4%

ICU Level of Service H

Analysis Period (min) 15

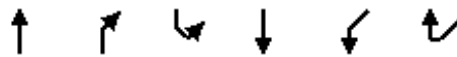
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016

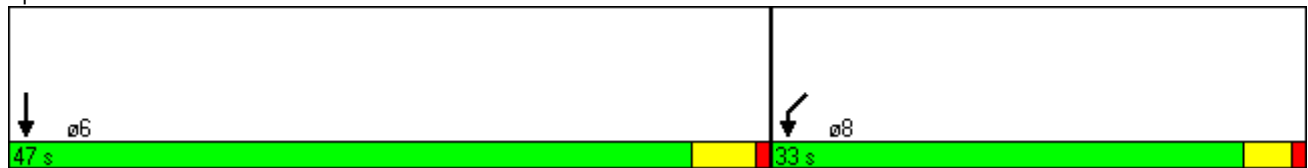


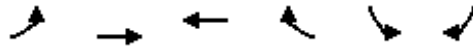
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1852 | 624 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5085 | 3433 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5085 | 3433 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.84 | 0.88 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 100% | 100% | 116% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2205 | 709 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2205 | 709 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 47.0 | 33.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 58.8% | 41.3% | 0.0% |
| Maximum Green (s) | | | | 42.0 | 29.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 29.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.36 | |
| v/c Ratio | | | | 0.83 | 0.57 | |
| Control Delay | | | | 19.3 | 22.7 | |
| Queue Delay | | | | 312.7 | 0.0 | |
| Total Delay | | | | 332.1 | 22.7 | |
| LOS | | | | F | C | |
| Approach Delay | | | | 332.1 | 22.7 | |
| Approach LOS | | | | F | C | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.83 |
| Intersection Signal Delay: | 256.8 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 61.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu





| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 447 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.995 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3504 | 0 | 0 | 1644 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3504 | 0 | 0 | 1644 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.79 | 0.25 | 0.92 | 0.25 |
| Growth Factor | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 566 | 19 | 0 | 51 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 585 | 0 | 0 | 51 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.02 | 1.02 | 1.02 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 22.5% ICU Level of Service A |
| Analysis Period (min) | 15 |

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|--------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 2257 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3574 | 0 | 0 | 0 | 0 | 3573 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3574 | 0 | 0 | 0 | 0 | 3573 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 1.00 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1898 | 0 | 0 | 0 | 0 | 2257 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1898 | 0 | 0 | 0 | 0 | 2257 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 59.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 |
| Total Split (%) | 66.3% | 0.0% | 0.0% | 0.0% | 0.0% | 33.7% |
| Maximum Green (s) | 55.0 | | | | | 24.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 55.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.27 |
| v/c Ratio | 0.86 | | | | | 2.34 |
| Control Delay | 19.1 | | | | | 627.4 |
| Queue Delay | 198.4 | | | | | 70.4 |
| Total Delay | 217.5 | | | | | 697.9 |
| LOS | F | | | | | F |
| Approach Delay | 217.5 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|--------------|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 89 |
| Actuated Cycle Length: | 89 |
| Offset: | 5 (6%), Referenced to phase 4:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.34 |
| Intersection Signal Delay: | 478.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 110.8% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Maciel

09/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1992 | 375 | 0 | 2979 | 0 | 101 | 720 | 143 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3184 | 1398 | 0 | 4885 | 0 | 0 | 3398 | 1537 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3184 | 1398 | 0 | 4885 | 0 | 0 | 3398 | 1537 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 144.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.72 | 0.92 | 0.85 | 0.92 | 0.81 | 0.77 | 0.87 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 3% | 2% | 1% | 1% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2189 | 604 | 0 | 3505 | 0 | 145 | 935 | 191 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2249 | 544 | 0 | 3505 | 0 | 0 | 1080 | 191 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 76.0 | 76.0 | 0.0 | 73.0 | 0.0 | 38.0 | 38.0 | 38.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 66.7% | 66.7% | 0.0% | 64.0% | 0.0% | 33.3% | 33.3% | 33.3% | 0.0% | 0.0% |
| Maximum Green (s) | | 72.0 | 72.0 | | 68.0 | | 33.0 | 33.0 | 33.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 72.0 | 72.0 | | 71.0 | | 33.0 | 33.0 | | | |
| Actuated g/C Ratio | | 0.63 | 0.63 | | 0.62 | | 0.29 | 0.29 | | | |
| v/c Ratio | | 1.12 | 0.62 | | 1.15 | | 1.10 | 0.43 | | | |
| Control Delay | | 83.2 | 16.5 | | 95.8 | | 97.8 | 36.5 | | | |
| Queue Delay | | 0.0 | 0.0 | | 147.2 | | 0.0 | 0.0 | | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

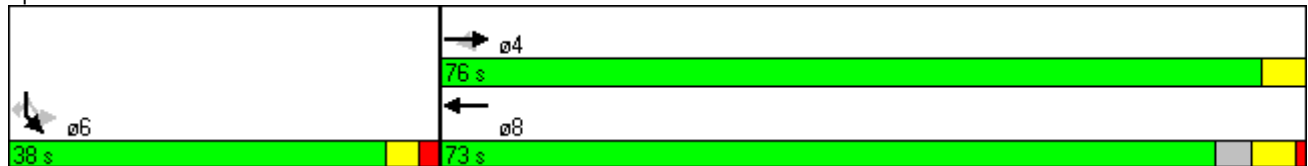


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------|-----|------|------|-----|-------|-----|------|------|------|-----|-----|
| Total Delay | | 83.2 | 16.5 | | 243.0 | | | 97.8 | 36.5 | | |
| LOS | | F | B | | F | | | F | D | | |
| Approach Delay | | 70.2 | | | 243.0 | | | 88.6 | | | |
| Approach LOS | | E | | | F | | | F | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 114 |
| Actuated Cycle Length: | 114 |
| Offset: | 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 130 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.15 |
| Intersection Signal Delay: | 153.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 166.3% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings
71: Av. Guarani & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Volume (vph) | 1934 | 155 | 0 | 3145 | 0 | 531 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.0 | 4.0 |
| Grade (%) | 14% | | | 0% | 14% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.985 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4509 | 0 | 0 | 5036 | 0 | 1558 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4509 | 0 | 0 | 5036 | 0 | 1558 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 61.5 | | | 53.0 | 86.4 | |
| Travel Time (s) | 4.4 | | | 3.8 | 6.2 | |
| Peak Hour Factor | 0.96 | 0.68 | 0.92 | 0.85 | 0.92 | 0.90 |
| Growth Factor | 100% | 100% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 6% | 0% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 2015 | 228 | 0 | 3700 | 0 | 590 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 2243 | 0 | 0 | 3700 | 0 | 590 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | R NA |
| Median Width(m) | 4.8 | | | 4.8 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.10 | 1.10 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 80.4% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

| Intersection | | | | |
|------------------------------|-------|-------|-------|-------|
| Intersection Delay (sec/veh) | 40.5 | | | |
| Intersection LOS | E | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 2 | 2 | 2 | 2 |
| Adjusted Approach Flow (vph) | 664 | 447 | 740 | 702 |
| Demand Flow Rate (pc/h) | 680 | 452 | 743 | 714 |
| Vehicles Circulating (pc/h) | 414 | 746 | 709 | 404 |
| Vehicles Exiting (pc/h) | 704 | 706 | 385 | 794 |
| Follow-Up Headway (s) | 3.186 | 3.186 | 3.186 | 3.186 |
| Ped Vol. Crossing Leg (#/hr) | 0 | 0 | 0 | 0 |
| Ped Capacity Adjustment | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay (sec/veh) | 23.6 | 19.3 | 81.9 | 26.4 |
| Approach LOS | C | C | F | D |
| Lane | Left | Left | Left | Left |
| Designated moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| Right Turn Channelized | | | | |
| Lane Utilization | 1.000 | 1.000 | 1.000 | 1.000 |
| Critical Headway (s) | 4.113 | 4.113 | 4.113 | 4.113 |
| Entry Flow Rate (pc/h) | 680 | 452 | 743 | 714 |
| Capacity, Entry Lane (pc/h) | 846 | 670 | 688 | 852 |
| Entry HV Adjustment Factor | 0.976 | 0.988 | 0.996 | 0.983 |
| Flow Rate, Entry (vph) | 664 | 447 | 740 | 702 |
| Capacity, Entry (vph) | 825 | 662 | 685 | 837 |
| Volume to Capacity Ratio | 0.804 | 0.674 | 1.080 | 0.838 |
| Control Delay (sec/veh) | 23.6 | 19.3 | 81.9 | 26.4 |
| Level of Service | C | C | F | D |
| 95th-Percentile Queue (veh) | 9 | 5 | 20 | 10 |

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 740 | 1266 | 2006 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.37 |
| Stops (#) | 740 | 0 | 740 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 3 | 3 | 5 |
| Distance Traveled (km) | 137 | 138 | 275 |
| Fuel Consumed (l) | 30 | 13 | 43 |
| Fuel Economy (km/l) | 4.6 | 10.5 | 6.4 |
| CO Emissions (kg) | 0.55 | 0.24 | 0.80 |
| NOx Emissions (kg) | 0.11 | 0.05 | 0.15 |
| VOC Emissions (kg) | 0.13 | 0.06 | 0.18 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 1141 | 747 | 191 | 264 | 2343 |
| Control Delay / Veh (s/v) | 330 | 33 | 32 | 64 | 181 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 330 | 33 | 32 | 64 | 181 |
| Total Delay (hr) | 104 | 7 | 2 | 5 | 118 |
| Stops / Veh | 0.82 | 0.84 | 0.88 | 0.83 | 0.83 |
| Stops (#) | 930 | 631 | 169 | 220 | 1950 |
| Average Speed (km/hr) | 2 | 22 | 8 | 5 | 4 |
| Total Travel Time (hr) | 109 | 12 | 2 | 5 | 128 |
| Distance Traveled (km) | 212 | 275 | 16 | 27 | 530 |
| Fuel Consumed (l) | 330 | 59 | 10 | 21 | 420 |
| Fuel Economy (km/l) | 0.6 | 4.7 | 1.6 | 1.3 | 1.3 |
| CO Emissions (kg) | 6.14 | 1.10 | 0.19 | 0.38 | 7.81 |
| NOx Emissions (kg) | 1.19 | 0.21 | 0.04 | 0.07 | 1.51 |
| VOC Emissions (kg) | 1.42 | 0.25 | 0.04 | 0.09 | 1.80 |
| Unserviced Vehicles (#) | 458 | 0 | 0 | 0 | 458 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

3: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 1789 | 1789 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 10 | 10 |
| Distance Traveled (km) | 498 | 498 |
| Fuel Consumed (l) | 47 | 47 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.88 | 0.88 |
| NOx Emissions (kg) | 0.17 | 0.17 |
| VOC Emissions (kg) | 0.20 | 0.20 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 637 | 1715 | 2352 |
| Control Delay / Veh (s/v) | 60 | 3 | 19 |
| Queue Delay / Veh (s/v) | 0 | 20 | 15 |
| Total Delay / Veh (s/v) | 60 | 24 | 33 |
| Total Delay (hr) | 11 | 11 | 22 |
| Stops / Veh | 0.86 | 0.11 | 0.31 |
| Stops (#) | 545 | 188 | 733 |
| Average Speed (km/hr) | 3 | 6 | 4 |
| Total Travel Time (hr) | 11 | 13 | 24 |
| Distance Traveled (km) | 30 | 78 | 107 |
| Fuel Consumed (l) | 45 | 43 | 87 |
| Fuel Economy (km/l) | 0.7 | 1.8 | 1.2 |
| CO Emissions (kg) | 0.83 | 0.79 | 1.62 |
| NOx Emissions (kg) | 0.16 | 0.15 | 0.31 |
| VOC Emissions (kg) | 0.19 | 0.18 | 0.37 |
| Unserviced Vehicles (#) | 13 | 0 | 13 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | SB | All |
|------------------------------|------|------|-------|
| Volume (vph) | 726 | 2477 | 3203 |
| Control Delay / Veh (s/v) | 30 | 60 | 53 |
| Queue Delay / Veh (s/v) | 0 | 185 | 143 |
| Total Delay / Veh (s/v) | 30 | 244 | 196 |
| Total Delay (hr) | 6 | 168 | 174 |
| Stops / Veh | 0.87 | 0.84 | 0.84 |
| Stops (#) | 630 | 2076 | 2706 |
| Average Speed (km/hr) | 6 | 1 | 1 |
| Total Travel Time (hr) | 7 | 172 | 178 |
| Distance Traveled (km) | 42 | 169 | 212 |
| Fuel Consumed (l) | 35 | 528 | 563 |
| Fuel Economy (km/l) | 1.2 | 0.3 | 0.4 |
| CO Emissions (kg) | 0.65 | 9.83 | 10.48 |
| NOx Emissions (kg) | 0.13 | 1.90 | 2.02 |
| VOC Emissions (kg) | 0.15 | 2.27 | 2.42 |
| Unserviced Vehicles (#) | 0 | 169 | 169 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

| Direction | EB | SB | NW | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 207 | 1649 | 570 | 2426 |
| Control Delay / Veh (s/v) | 0 | 30 | 15 | 24 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 30 | 15 | 24 |
| Total Delay (hr) | 0 | 14 | 2 | 16 |
| Stops / Veh | 0.00 | 0.86 | 0.65 | 0.74 |
| Stops (#) | 0 | 1422 | 371 | 1793 |
| Average Speed (km/hr) | 47 | 12 | 7 | 12 |
| Total Travel Time (hr) | 0 | 18 | 3 | 21 |
| Distance Traveled (km) | 8 | 224 | 18 | 250 |
| Fuel Consumed (l) | 1 | 91 | 17 | 108 |
| Fuel Economy (km/l) | NA | 2.5 | 1.1 | 2.3 |
| CO Emissions (kg) | 0.01 | 1.69 | 0.31 | 2.01 |
| NOx Emissions (kg) | 0.00 | 0.33 | 0.06 | 0.39 |
| VOC Emissions (kg) | 0.00 | 0.39 | 0.07 | 0.46 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

7: Av. Princesa D'Oeste

| Direction | EB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1170 | 2070 | 3240 |
| Control Delay / Veh (s/v) | 24 | 443 | 292 |
| Queue Delay / Veh (s/v) | 183 | 188 | 186 |
| Total Delay / Veh (s/v) | 207 | 631 | 478 |
| Total Delay (hr) | 67 | 363 | 430 |
| Stops / Veh | 0.82 | 0.68 | 0.73 |
| Stops (#) | 957 | 1417 | 2374 |
| Average Speed (km/hr) | 0 | 2 | 2 |
| Total Travel Time (hr) | 68 | 381 | 449 |
| Distance Traveled (km) | 28 | 927 | 955 |
| Fuel Consumed (l) | 210 | 1125 | 1335 |
| Fuel Economy (km/l) | 0.1 | 0.8 | 0.7 |
| CO Emissions (kg) | 3.91 | 20.92 | 24.83 |
| NOx Emissions (kg) | 0.75 | 4.04 | 4.79 |
| VOC Emissions (kg) | 0.90 | 4.83 | 5.73 |
| Unserviced Vehicles (#) | 0 | 994 | 994 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

8: Av. Ayrton Senna da Silva

| Direction | EB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1363 | 762 | 2125 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 124 | 44 | 169 |
| Fuel Consumed (l) | 12 | 4 | 16 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.22 | 0.08 | 0.30 |
| NOx Emissions (kg) | 0.04 | 0.02 | 0.06 |
| VOC Emissions (kg) | 0.05 | 0.02 | 0.07 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 553 | 338 | 587 | 625 | 2103 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Stops (#) | 553 | 338 | 587 | 625 | 2103 |
| Average Speed (km/hr) | 50 | 50 | 50 | 50 | 50 |
| Total Travel Time (hr) | 4 | 1 | 1 | 2 | 8 |
| Distance Traveled (km) | 203 | 41 | 71 | 107 | 422 |
| Fuel Consumed (l) | 32 | 12 | 20 | 24 | 87 |
| Fuel Economy (km/l) | 6.4 | 3.6 | 3.6 | 4.4 | 4.8 |
| CO Emissions (kg) | 0.59 | 0.21 | 0.37 | 0.45 | 1.62 |
| NOx Emissions (kg) | 0.11 | 0.04 | 0.07 | 0.09 | 0.31 |
| VOC Emissions (kg) | 0.14 | 0.05 | 0.09 | 0.10 | 0.37 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

| Direction | NB | SE | All |
|------------------------------|------|------|------|
| Volume (vph) | 537 | 1155 | 1692 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.32 |
| Stops (#) | 537 | 0 | 537 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 | 2 |
| Distance Traveled (km) | 71 | 47 | 118 |
| Fuel Consumed (l) | 19 | 4 | 23 |
| Fuel Economy (km/l) | 3.8 | 10.5 | 5.1 |
| CO Emissions (kg) | 0.35 | 0.08 | 0.43 |
| NOx Emissions (kg) | 0.07 | 0.02 | 0.08 |
| VOC Emissions (kg) | 0.08 | 0.02 | 0.10 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Direction | WB | SB | NE | All |
|------------------------------|------|------|------|-------|
| Volume (vph) | 317 | 1500 | 1803 | 3620 |
| Control Delay / Veh (s/v) | 14 | 52 | 23 | 34 |
| Queue Delay / Veh (s/v) | 172 | 0 | 221 | 125 |
| Total Delay / Veh (s/v) | 185 | 52 | 243 | 159 |
| Total Delay (hr) | 16 | 22 | 122 | 160 |
| Stops / Veh | 0.51 | 0.89 | 0.76 | 0.79 |
| Stops (#) | 163 | 1341 | 1373 | 2877 |
| Average Speed (km/hr) | 1 | 11 | 1 | 2 |
| Total Travel Time (hr) | 17 | 28 | 124 | 168 |
| Distance Traveled (km) | 10 | 293 | 114 | 417 |
| Fuel Consumed (l) | 50 | 118 | 379 | 547 |
| Fuel Economy (km/l) | 0.2 | 2.5 | 0.3 | 0.8 |
| CO Emissions (kg) | 0.93 | 2.20 | 7.05 | 10.18 |
| NOx Emissions (kg) | 0.18 | 0.42 | 1.36 | 1.96 |
| VOC Emissions (kg) | 0.21 | 0.51 | 1.63 | 2.35 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1033 | 1033 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 51 | 51 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 34 | 34 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.06 | 0.06 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

23: Rua Proença

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 312 | 312 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 30 | 30 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.05 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

24: Rua Barão de Paranapanema

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 575 | 105 | 680 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 19 | 3 | 22 |
| Fuel Consumed (l) | 2 | 0 | 2 |
| Fuel Economy (km/l) | 10.5 | NA | 10.5 |
| CO Emissions (kg) | 0.03 | 0.00 | 0.04 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

25: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | EB | NB | All |
|------------------------------|-------|------|-------|
| Volume (vph) | 1278 | 1522 | 2800 |
| Control Delay / Veh (s/v) | 706 | 8 | 326 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 706 | 8 | 326 |
| Total Delay (hr) | 250 | 3 | 254 |
| Stops / Veh | 0.78 | 0.47 | 0.61 |
| Stops (#) | 994 | 717 | 1711 |
| Average Speed (km/hr) | 0 | 10 | 0 |
| Total Travel Time (hr) | 251 | 4 | 255 |
| Distance Traveled (km) | 41 | 42 | 82 |
| Fuel Consumed (l) | 720 | 29 | 749 |
| Fuel Economy (km/l) | 0.1 | 1.4 | 0.1 |
| CO Emissions (kg) | 13.39 | 0.54 | 13.93 |
| NOx Emissions (kg) | 2.58 | 0.10 | 2.69 |
| VOC Emissions (kg) | 3.09 | 0.12 | 3.21 |
| Unserved Vehicles (#) | 770 | 0 | 770 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

26: Rua Conde D'Eu & Av. Princesa D'Oeste

| Direction | WB | NB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1550 | 2260 | 3810 |
| Control Delay / Veh (s/v) | 18 | 213 | 134 |
| Queue Delay / Veh (s/v) | 0 | 247 | 147 |
| Total Delay / Veh (s/v) | 18 | 460 | 280 |
| Total Delay (hr) | 8 | 289 | 297 |
| Stops / Veh | 0.73 | 0.79 | 0.76 |
| Stops (#) | 1138 | 1775 | 2913 |
| Average Speed (km/hr) | 15 | 1 | 1 |
| Total Travel Time (hr) | 11 | 292 | 303 |
| Distance Traveled (km) | 168 | 155 | 323 |
| Fuel Consumed (l) | 63 | 855 | 918 |
| Fuel Economy (km/l) | 2.6 | 0.2 | 0.4 |
| CO Emissions (kg) | 1.18 | 15.90 | 17.08 |
| NOx Emissions (kg) | 0.23 | 3.07 | 3.30 |
| VOC Emissions (kg) | 0.27 | 3.67 | 3.94 |
| Unserved Vehicles (#) | 0 | 659 | 659 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

28: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 2960 | 2960 |
| Control Delay / Veh (s/v) | 2 | 2 |
| Queue Delay / Veh (s/v) | 3 | 3 |
| Total Delay / Veh (s/v) | 5 | 5 |
| Total Delay (hr) | 4 | 4 |
| Stops / Veh | 0.20 | 0.20 |
| Stops (#) | 602 | 602 |
| Average Speed (km/hr) | 26 | 26 |
| Total Travel Time (hr) | 9 | 9 |
| Distance Traveled (km) | 243 | 243 |
| Fuel Consumed (l) | 49 | 49 |
| Fuel Economy (km/l) | 5.0 | 5.0 |
| CO Emissions (kg) | 0.91 | 0.91 |
| NOx Emissions (kg) | 0.18 | 0.18 |
| VOC Emissions (kg) | 0.21 | 0.21 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | NB | All |
|------------------------------|------|------|-------|-------|
| Volume (vph) | 2109 | 2591 | 1328 | 6028 |
| Control Delay / Veh (s/v) | 18 | 45 | 401 | 114 |
| Queue Delay / Veh (s/v) | 164 | 0 | 310 | 126 |
| Total Delay / Veh (s/v) | 182 | 45 | 710 | 239 |
| Total Delay (hr) | 107 | 32 | 262 | 401 |
| Stops / Veh | 0.70 | 0.86 | 0.77 | 0.78 |
| Stops (#) | 1483 | 2220 | 1019 | 4722 |
| Average Speed (km/hr) | 1 | 12 | 0 | 2 |
| Total Travel Time (hr) | 109 | 42 | 263 | 415 |
| Distance Traveled (km) | 124 | 512 | 50 | 685 |
| Fuel Consumed (l) | 341 | 187 | 754 | 1282 |
| Fuel Economy (km/l) | 0.4 | 2.7 | 0.1 | 0.5 |
| CO Emissions (kg) | 6.34 | 3.48 | 14.02 | 23.84 |
| NOx Emissions (kg) | 1.22 | 0.67 | 2.71 | 4.60 |
| VOC Emissions (kg) | 1.46 | 0.80 | 3.23 | 5.50 |
| Unserviced Vehicles (#) | 0 | 64 | 429 | 493 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 822 | 831 | 1653 |
| Control Delay / Veh (s/v) | 7 | 370 | 190 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 7 | 370 | 190 |
| Total Delay (hr) | 2 | 85 | 87 |
| Stops / Veh | 0.38 | 0.70 | 0.54 |
| Stops (#) | 314 | 580 | 894 |
| Average Speed (km/hr) | 8 | 1 | 1 |
| Total Travel Time (hr) | 2 | 87 | 89 |
| Distance Traveled (km) | 15 | 71 | 86 |
| Fuel Consumed (l) | 13 | 257 | 269 |
| Fuel Economy (km/l) | 1.2 | 0.3 | 0.3 |
| CO Emissions (kg) | 0.24 | 4.77 | 5.01 |
| NOx Emissions (kg) | 0.05 | 0.92 | 0.97 |
| VOC Emissions (kg) | 0.06 | 1.10 | 1.16 |
| Unserviced Vehicles (#) | 0 | 354 | 354 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

37: Av. Dr. Jesuino Marcondes Machado

| Direction | SB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1003 | 648 | 1651 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 4 | 1 | 5 |
| Distance Traveled (km) | 204 | 38 | 242 |
| Fuel Consumed (l) | 19 | 4 | 23 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.36 | 0.07 | 0.43 |
| NOx Emissions (kg) | 0.07 | 0.01 | 0.08 |
| VOC Emissions (kg) | 0.08 | 0.02 | 0.10 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | NB | All |
|------------------------------|-------|-------|
| Volume (vph) | 3241 | 3241 |
| Control Delay / Veh (s/v) | 57 | 57 |
| Queue Delay / Veh (s/v) | 145 | 145 |
| Total Delay / Veh (s/v) | 202 | 202 |
| Total Delay (hr) | 181 | 181 |
| Stops / Veh | 0.75 | 0.75 |
| Stops (#) | 2437 | 2437 |
| Average Speed (km/hr) | 1 | 1 |
| Total Travel Time (hr) | 186 | 186 |
| Distance Traveled (km) | 217 | 217 |
| Fuel Consumed (l) | 578 | 578 |
| Fuel Economy (km/l) | 0.4 | 0.4 |
| CO Emissions (kg) | 10.75 | 10.75 |
| NOx Emissions (kg) | 2.07 | 2.07 |
| VOC Emissions (kg) | 2.48 | 2.48 |
| Unserviced Vehicles (#) | 280 | 280 |
| Vehicles in dilemma zone (#) | 0 | 0 |

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 460 | 2115 | 2575 |
| Control Delay / Veh (s/v) | 21 | 21 | 21 |
| Queue Delay / Veh (s/v) | 0 | 151 | 124 |
| Total Delay / Veh (s/v) | 21 | 172 | 145 |
| Total Delay (hr) | 3 | 101 | 104 |
| Stops / Veh | 0.85 | 0.77 | 0.79 |
| Stops (#) | 389 | 1634 | 2023 |
| Average Speed (km/hr) | 10 | 1 | 2 |
| Total Travel Time (hr) | 3 | 104 | 107 |
| Distance Traveled (km) | 32 | 134 | 166 |
| Fuel Consumed (l) | 19 | 330 | 349 |
| Fuel Economy (km/l) | 1.7 | 0.4 | 0.5 |
| CO Emissions (kg) | 0.36 | 6.13 | 6.49 |
| NOx Emissions (kg) | 0.07 | 1.18 | 1.25 |
| VOC Emissions (kg) | 0.08 | 1.41 | 1.50 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| Direction | EB | NE | All |
|------------------------------|------|------|------|
| Volume (vph) | 655 | 3414 | 4069 |
| Control Delay / Veh (s/v) | 66 | 18 | 26 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 66 | 18 | 26 |
| Total Delay (hr) | 12 | 17 | 29 |
| Stops / Veh | 0.93 | 0.64 | 0.69 |
| Stops (#) | 606 | 2189 | 2795 |
| Average Speed (km/hr) | 2 | 23 | 17 |
| Total Travel Time (hr) | 13 | 32 | 44 |
| Distance Traveled (km) | 22 | 733 | 755 |
| Fuel Consumed (l) | 49 | 166 | 215 |
| Fuel Economy (km/l) | 0.4 | 4.4 | 3.5 |
| CO Emissions (kg) | 0.91 | 3.08 | 3.99 |
| NOx Emissions (kg) | 0.18 | 0.59 | 0.77 |
| VOC Emissions (kg) | 0.21 | 0.71 | 0.92 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1463 | 1463 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 58 | 58 |
| Fuel Consumed (l) | 6 | 6 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.10 | 0.10 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coutinho

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 33 | 803 | 836 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 33 | 0 | 33 |
| Average Speed (km/hr) | 50 | 51 | 51 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 27 | 29 |
| Fuel Consumed (l) | 1 | 3 | 3 |
| Fuel Economy (km/l) | NA | 10.5 | 8.3 |
| CO Emissions (kg) | 0.02 | 0.05 | 0.06 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.00 | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

53: Av. Dr. Moraes Salles & Retorno

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 653 | 2 | 655 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.00 |
| Stops (#) | 0 | 2 | 2 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 27 | 0 | 27 |
| Fuel Consumed (l) | 3 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 10.3 |
| CO Emissions (kg) | 0.05 | 0.00 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales

| Direction | EB | SB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1425 | 1783 | 3208 |
| Control Delay / Veh (s/v) | 60 | 143 | 106 |
| Queue Delay / Veh (s/v) | 0 | 256 | 142 |
| Total Delay / Veh (s/v) | 60 | 399 | 248 |
| Total Delay (hr) | 24 | 198 | 221 |
| Stops / Veh | 0.89 | 0.81 | 0.84 |
| Stops (#) | 1262 | 1445 | 2707 |
| Average Speed (km/hr) | 2 | 1 | 1 |
| Total Travel Time (hr) | 25 | 200 | 225 |
| Distance Traveled (km) | 58 | 104 | 162 |
| Fuel Consumed (l) | 100 | 590 | 689 |
| Fuel Economy (km/l) | 0.6 | 0.2 | 0.2 |
| CO Emissions (kg) | 1.85 | 10.97 | 12.82 |
| NOx Emissions (kg) | 0.36 | 2.12 | 2.47 |
| VOC Emissions (kg) | 0.43 | 2.53 | 2.96 |
| Unserviced Vehicles (#) | 23 | 348 | 371 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

56: Rua Barão de Paranapanema & Acesso

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 38 | 248 | 286 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.87 |
| Stops (#) | 0 | 248 | 248 |
| Average Speed (km/hr) | 50 | 49 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 2 | 9 | 10 |
| Fuel Consumed (l) | 0 | 6 | 7 |
| Fuel Economy (km/l) | NA | 1.3 | 1.6 |
| CO Emissions (kg) | 0.00 | 0.12 | 0.12 |
| NOx Emissions (kg) | 0.00 | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.00 | 0.03 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

59: Av. Princesa D'Oeste & retorno

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 1562 | 1562 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 5 | 5 |
| Distance Traveled (km) | 259 | 259 |
| Fuel Consumed (l) | 25 | 25 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.46 | 0.46 |
| NOx Emissions (kg) | 0.09 | 0.09 |
| VOC Emissions (kg) | 0.11 | 0.11 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

61: Av. Princesa D'Oeste & retorno

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 40 | 1075 | 1115 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 40 | 0 | 40 |
| Average Speed (km/hr) | 49 | 50 | 49 |
| Total Travel Time (hr) | 0 | 0 | 1 |
| Distance Traveled (km) | 1 | 24 | 25 |
| Fuel Consumed (l) | 1 | 2 | 3 |
| Fuel Economy (km/l) | 1.3 | 10.5 | 7.6 |
| CO Emissions (kg) | 0.02 | 0.04 | 0.06 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.00 | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 726 | 1534 | 2260 |
| Control Delay / Veh (s/v) | 40 | 12 | 21 |
| Queue Delay / Veh (s/v) | 671 | 64 | 259 |
| Total Delay / Veh (s/v) | 711 | 76 | 280 |
| Total Delay (hr) | 143 | 32 | 176 |
| Stops / Veh | 0.88 | 0.60 | 0.69 |
| Stops (#) | 642 | 913 | 1555 |
| Average Speed (km/hr) | 0 | 3 | 1 |
| Total Travel Time (hr) | 144 | 34 | 178 |
| Distance Traveled (km) | 27 | 104 | 131 |
| Fuel Consumed (l) | 414 | 120 | 534 |
| Fuel Economy (km/l) | 0.1 | 0.9 | 0.2 |
| CO Emissions (kg) | 7.70 | 2.23 | 9.93 |
| NOx Emissions (kg) | 1.49 | 0.43 | 1.92 |
| VOC Emissions (kg) | 1.78 | 0.51 | 2.29 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

63: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1852 | 624 | 2476 |
| Control Delay / Veh (s/v) | 19 | 23 | 20 |
| Queue Delay / Veh (s/v) | 313 | 0 | 234 |
| Total Delay / Veh (s/v) | 332 | 23 | 254 |
| Total Delay (hr) | 171 | 4 | 175 |
| Stops / Veh | 0.79 | 0.77 | 0.79 |
| Stops (#) | 1468 | 481 | 1949 |
| Average Speed (km/hr) | 0 | 5 | 1 |
| Total Travel Time (hr) | 172 | 4 | 177 |
| Distance Traveled (km) | 74 | 20 | 93 |
| Fuel Consumed (l) | 513 | 24 | 537 |
| Fuel Economy (km/l) | 0.1 | 0.8 | 0.2 |
| CO Emissions (kg) | 9.55 | 0.44 | 9.98 |
| NOx Emissions (kg) | 1.84 | 0.08 | 1.93 |
| VOC Emissions (kg) | 2.20 | 0.10 | 2.30 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

64: Av. Dr. Moraes Salles & R. Antônio A. de Camargo

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 452 | 13 | 465 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.03 |
| Stops (#) | 0 | 13 | 13 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 28 | 1 | 29 |
| Fuel Consumed (l) | 3 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 9.5 |
| CO Emissions (kg) | 0.05 | 0.01 | 0.06 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

66: Av. José de Souza Campos

| Direction | NB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1803 | 2257 | 4060 |
| Control Delay / Veh (s/v) | 19 | 627 | 357 |
| Queue Delay / Veh (s/v) | 198 | 70 | 127 |
| Total Delay / Veh (s/v) | 218 | 698 | 485 |
| Total Delay (hr) | 109 | 438 | 546 |
| Stops / Veh | 0.77 | 0.72 | 0.74 |
| Stops (#) | 1381 | 1627 | 3008 |
| Average Speed (km/hr) | 1 | 0 | 0 |
| Total Travel Time (hr) | 110 | 439 | 550 |
| Distance Traveled (km) | 74 | 89 | 163 |
| Fuel Consumed (l) | 340 | 1257 | 1597 |
| Fuel Economy (km/l) | 0.2 | 0.1 | 0.1 |
| CO Emissions (kg) | 6.32 | 23.38 | 29.70 |
| NOx Emissions (kg) | 1.22 | 4.51 | 5.73 |
| VOC Emissions (kg) | 1.46 | 5.39 | 6.85 |
| Unserviced Vehicles (#) | 0 | 1293 | 1293 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Mach

| Direction | EB | WB | SB | All |
|------------------------------|------|-------|------|-------|
| Volume (vph) | 2427 | 2979 | 1003 | 6409 |
| Control Delay / Veh (s/v) | 72 | 96 | 88 | 86 |
| Queue Delay / Veh (s/v) | 0 | 147 | 0 | 68 |
| Total Delay / Veh (s/v) | 72 | 243 | 88 | 154 |
| Total Delay (hr) | 49 | 201 | 24 | 274 |
| Stops / Veh | 0.80 | 0.84 | 0.86 | 0.83 |
| Stops (#) | 1933 | 2500 | 859 | 5292 |
| Average Speed (km/hr) | 8 | 1 | 2 | 2 |
| Total Travel Time (hr) | 58 | 205 | 26 | 289 |
| Distance Traveled (km) | 479 | 175 | 63 | 717 |
| Fuel Consumed (l) | 224 | 630 | 93 | 947 |
| Fuel Economy (km/l) | 2.1 | 0.3 | 0.7 | 0.8 |
| CO Emissions (kg) | 4.17 | 11.71 | 1.73 | 17.61 |
| NOx Emissions (kg) | 0.80 | 2.26 | 0.33 | 3.40 |
| VOC Emissions (kg) | 0.96 | 2.70 | 0.40 | 4.06 |
| Unserviced Vehicles (#) | 215 | 394 | 74 | 683 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

71: Av. Guarani & Av. Dr. Moraes Salles

| Direction | EB | WB | NB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 2089 | 3145 | 531 | 5765 |
| Control Delay / Veh (s/v) | 0 | 0 | 383 | 35 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 383 | 35 |
| Total Delay (hr) | 0 | 0 | 57 | 57 |
| Stops / Veh | 0.00 | 0.00 | 1.00 | 0.09 |
| Stops (#) | 0 | 0 | 531 | 531 |
| Average Speed (km/hr) | 50 | 50 | 1 | 11 |
| Total Travel Time (hr) | 3 | 12 | 57 | 72 |
| Distance Traveled (km) | 128 | 621 | 46 | 795 |
| Fuel Consumed (l) | 12 | 59 | 173 | 244 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 0.3 | 3.3 |
| CO Emissions (kg) | 0.23 | 1.10 | 3.22 | 4.54 |
| NOx Emissions (kg) | 0.04 | 0.21 | 0.62 | 0.88 |
| VOC Emissions (kg) | 0.05 | 0.25 | 0.74 | 1.05 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

Network Totals

| | |
|------------------------------|--------|
| Number of Intersections | 36 |
| Control Delay / Veh (s/v) | 81 |
| Queue Delay / Veh (s/v) | 71 |
| Total Delay / Veh (s/v) | 152 |
| Total Delay (hr) | 3726 |
| Stops / Veh | 0.56 |
| Stops (#) | 49288 |
| Average Speed (km/hr) | 2 |
| Total Travel Time (hr) | 3913 |
| Distance Traveled (km) | 9336 |
| Fuel Consumed (l) | 12314 |
| Fuel Economy (km/l) | 0.8 |
| CO Emissions (kg) | 229.04 |
| NOx Emissions (kg) | 44.21 |
| VOC Emissions (kg) | 52.83 |
| Unserved Vehicles (#) | 6536 |
| Vehicles in dilemma zone (#) | 0 |
| Performance Index | 3862.9 |

Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 1329 | 800 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.944 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2787 | 3341 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2787 | 3341 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 100% | 116% | 116% | 116% |
| Adj. Flow (vph) | 0 | 1445 | 1067 | 637 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1445 | 1704 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 94.1% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 261 | 766 | 34 | 198 | 630 | 32 | 14 | 103 | 24 | 25 | 118 | 216 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.991 | | | 0.992 | | | 0.971 | | | 0.906 | |
| Flt Protected | | 0.987 | | | 0.987 | | | 0.987 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 3353 | 0 | 0 | 3305 | 0 | 0 | 3234 | 0 | 0 | 3095 | 0 |
| Flt Permitted | | 0.987 | | | 0.987 | | | 0.677 | | | 0.910 | |
| Satd. Flow (perm) | 0 | 3353 | 0 | 0 | 3305 | 0 | 0 | 2218 | 0 | 0 | 2825 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 104.1 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.5 | |
| Peak Hour Factor | 0.82 | 0.95 | 0.57 | 0.77 | 0.79 | 0.54 | 0.25 | 0.79 | 0.60 | 0.54 | 0.54 | 0.49 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 100% | 116% | 100% | 116% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 318 | 806 | 69 | 298 | 797 | 59 | 65 | 130 | 46 | 46 | 219 | 441 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1193 | 0 | 0 | 1154 | 0 | 0 | 241 | 0 | 0 | 706 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 24.0 | 24.0 | 0.0 | 26.0 | 26.0 | 0.0 | 13.0 | 13.0 | 0.0 | 13.0 | 13.0 | 0.0 |
| Total Split (%) | 38.1% | 38.1% | 0.0% | 41.3% | 41.3% | 0.0% | 20.6% | 20.6% | 0.0% | 20.6% | 20.6% | 0.0% |
| Maximum Green (s) | 18.0 | 18.0 | | 20.0 | 20.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 4.0 | 6.0 | 6.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 18.0 | | | 20.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.32 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 1.25 | | | 1.10 | | | 0.85 | | | 2.24dr | |
| Control Delay | | 143.6 | | | 83.3 | | | 57.2 | | | 467.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 143.6 | | | 83.3 | | | 57.2 | | | 467.0 | |
| LOS | | F | | | F | | | E | | | F | |
| Approach Delay | | 143.6 | | | 83.3 | | | 57.2 | | | 467.0 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016

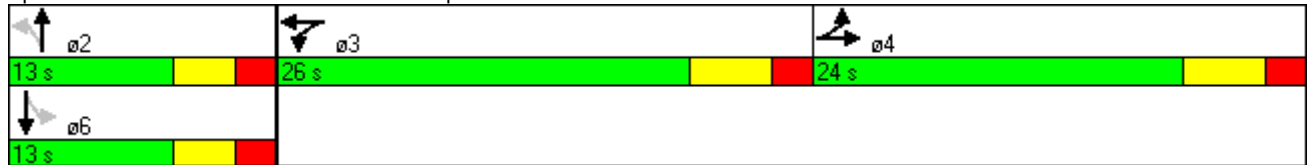


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | F | | | E | | | F | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 63 |
| Actuated Cycle Length: | 63 |
| Offset: | 24 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.97 |
| Intersection Signal Delay: | 185.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 88.6% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2484 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Fr _t | | | | | 0.992 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4944 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4944 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 116% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2700 | 155 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2855 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 54.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|--------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 501 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 1017 | 1927 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Flt | | 0.981 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.981 | |
| Satd. Flow (prot) | 0 | 3405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4739 | 0 |
| Flt Permitted | | | | | | | | | | | 0.981 | |
| Satd. Flow (perm) | 0 | 3405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4739 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 1.00 | 0.61 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.91 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 501 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 1338 | 2118 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 573 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3456 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 23.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 | 84.0 | 0.0 |
| Total Split (%) | 0.0% | 21.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 78.5% | 78.5% | 0.0% |
| Maximum Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Actuated g/C Ratio | | 0.15 | | | | | | | | 0.74 | 0.74 | |
| v/c Ratio | | 1.13 | | | | | | | | 1.08dl | 1.08dl | |
| Control Delay | | 121.4 | | | | | | | | 26.8 | 26.8 | |
| Queue Delay | | 0.0 | | | | | | | | 119.0 | 119.0 | |
| Total Delay | | 121.4 | | | | | | | | 145.9 | 145.9 | |
| LOS | | F | | | | | | | | F | F | |
| Approach Delay | | 121.4 | | | | | | | | 145.9 | 145.9 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | | F | | | | | |

Intersection Summary

| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 107 |
| Actuated Cycle Length: | 107 |
| Offset: | 58 (54%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 100 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.13 |
| Intersection Signal Delay: | 142.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 83.1% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |
| dl Defacto Left Lane. Recode with 1 though lane as a left lane. | |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 501 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2944 | 1080 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.959 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4912 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4912 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.89 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 539 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3200 | 1213 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 539 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4413 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 0.0 | 23.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 77.0 | 0.0 |
| Total Split (%) | 0.0% | 23.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 77.0% | 0.0% |
| Maximum Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Actuated g/C Ratio | | 0.16 | | | | | | | | | 0.72 | |
| v/c Ratio | | 0.98 | | | | | | | | | 1.25 | |
| Control Delay | | 77.1 | | | | | | | | | 132.5 | |
| Queue Delay | | 0.0 | | | | | | | | | 33.9 | |
| Total Delay | | 77.1 | | | | | | | | | 166.4 | |
| LOS | | E | | | | | | | | | F | |
| Approach Delay | | 77.1 | | | | | | | | | 166.4 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | E | | | | | | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 58 (58%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.25 |
| Intersection Signal Delay: | 156.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 104.9% |
| ICU Level of Service | G |
| Analysis Period (min) | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



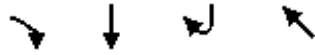
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 2476 | 7 | 662 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1596 | 5131 | 0 | 3505 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1596 | 5131 | 0 | 3505 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.87 | 0.44 | 0.88 |
| Growth Factor | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 366 | 2846 | 18 | 752 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 366 | 2864 | 0 | 752 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | 0.0 | 65.0 | 0.0 | 37.0 |
| Total Split (%) | 0.0% | 63.7% | 0.0% | 36.3% |
| Maximum Green (s) | | 60.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 102.0 | 60.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.59 | | 0.31 |
| v/c Ratio | 0.23 | 0.95 | | 0.68 |
| Control Delay | 0.3 | 28.3 | | 34.4 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.3 | 28.3 | | 34.4 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------|------|------|------|------|
| LOS | A | C | | C |
| Approach Delay | | 28.3 | | 34.4 |
| Approach LOS | | C | | C |

Intersection Summary

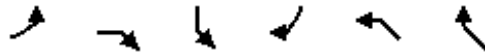
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 102 |
| Actuated Cycle Length: | 102 |
| Offset: | 58 (57%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 26.9 |
| Intersection Capacity Utilization | 74.7% |
| Analysis Period (min) | 15 |
| Intersection LOS: | C |
| ICU Level of Service | D |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

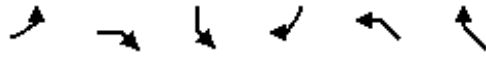


Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|--------|------|
| Lane Configurations | | | | | | | |
| Volume (vph) | 1931 | 0 | 0 | 0 | 0 | 2342 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | 0.850 | |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3467 | 0 | 0 | 0 | 0 | 3573 | |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3467 | 0 | 0 | 0 | 0 | 3573 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.86 | 0.92 | 0.92 | 0.92 | 0.92 | 0.67 | |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 100% | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 2245 | 0 | 0 | 0 | 0 | 3496 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2245 | 0 | 0 | 0 | 0 | 3496 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | NA | | | | | custom | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | 2 | |
| Minimum Split (s) | 22.0 | | | | | 22.0 | 22.0 |
| Total Split (s) | 65.0 | 0.0 | 0.0 | 0.0 | 0.0 | 43.0 | 65.0 |
| Total Split (%) | 60.2% | 0.0% | 0.0% | 0.0% | 0.0% | 39.8% | 60% |
| Maximum Green (s) | 59.0 | | | | | 37.0 | 59.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 | 0 |
| Act Effct Green (s) | 59.0 | | | | | 37.0 | |
| Actuated g/C Ratio | 0.55 | | | | | 0.34 | |
| v/c Ratio | 1.19 | | | | | 2.86 | |
| Control Delay | 114.4 | | | | | 855.6 | |
| Queue Delay | 0.0 | | | | | 0.0 | |
| Total Delay | 114.4 | | | | | 855.6 | |
| LOS | F | | | | | F | |
| Approach Delay | 114.4 | | | | | | |



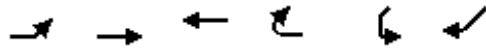
| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|--------------|-----|-----|-----|-----|-----|-----|----|
| Approach LOS | F | | | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 108 |
| Actuated Cycle Length: | 108 |
| Offset: | 0 (0%), Referenced to phase 4:EBL and 8:Ped, Start of Green, Master Intersection |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.86 |
| Intersection Signal Delay: | 565.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 119.7% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 7: Av. Princesa D'Oeste

| | |
|------|------|
| ø2 | ø4 |
| 43 s | 65 s |
| | ø8 |
| | 65 s |



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 501 | 545 | 0 | 0 | 0 | 1080 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1717 | 1807 | 0 | 0 | 0 | 2703 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1717 | 1807 | 0 | 0 | 0 | 2703 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.93 | 0.65 | 0.92 | 0.92 | 0.92 | 0.89 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 100% |
| Adj. Flow (vph) | 539 | 838 | 0 | 0 | 0 | 1213 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 539 | 838 | 0 | 0 | 0 | 1213 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 390 | 302 | 15 | 112 | 376 | 38 | 11 | 166 | 163 | 15 | 284 | 546 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | | | 0.985 | | | 0.939 | | | 0.917 | |
| Flt Protected | | 0.973 | | | 0.987 | | | 0.997 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1690 | 0 | 0 | 1711 | 0 | 0 | 1708 | 0 | 0 | 1655 | 0 |
| Flt Permitted | | 0.973 | | | 0.987 | | | 0.997 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1690 | 0 | 0 | 1711 | 0 | 0 | 1708 | 0 | 0 | 1655 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 139.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 10.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.72 | 0.88 | 0.59 | 0.50 | 0.81 | 0.86 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 424 | 328 | 19 | 180 | 427 | 75 | 26 | 238 | 220 | 19 | 358 | 593 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 771 | 0 | 0 | 682 | 0 | 0 | 484 | 0 | 0 | 970 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 136.8%

ICU Level of Service H

Analysis Period (min) 15

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 751 | 639 | 879 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.923 | |
| Flt Protected | | | | | 0.976 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1667 | 3304 | 0 |
| Flt Permitted | | | | | 0.976 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1667 | 3304 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.78 | 0.78 | 0.88 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 963 | 950 | 999 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 963 | 1949 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.98 | 0.98 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 52.3% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

05/05/2016



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 392 | 3358 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.995 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3467 | 5008 | 0 | 4879 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3467 | 5008 | 0 | 4879 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.93 | 0.90 | 0.67 | 0.95 |
| Growth Factor | 100% | 100% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 422 | 3731 | 119 | 1393 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 422 | 3850 | 0 | 1393 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.03 | 1.03 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 55.0 | 50.0 | 0.0 | 49.0 |
| Total Split (%) | 52.4% | 47.6% | 0.0% | 46.7% |
| Maximum Green (s) | 51.0 | 44.0 | | 44.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 51.0 | 44.0 | | 50.0 |
| Actuated g/C Ratio | 0.49 | 0.42 | | 0.48 |
| v/c Ratio | 0.25 | 1.83 | | 0.60 |
| Control Delay | 16.3 | 401.2 | | 21.5 |
| Queue Delay | 210.5 | 0.0 | | 181.5 |
| Total Delay | 226.8 | 401.2 | | 203.1 |
| LOS | F | F | | F |
| Approach Delay | | 401.2 | | 203.1 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

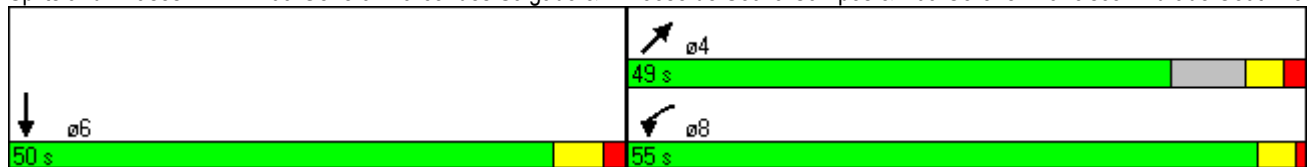


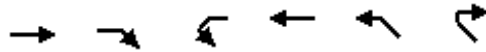
| Lane Group | WBL2 | SBT | SBR2 | NET |
|--------------|------|-----|------|-----|
| Approach LOS | | F | | F |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 105 |
| Actuated Cycle Length: | 105 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green, Master Intersection |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.83 |
| Intersection Signal Delay: | 339.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 115.9% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho





| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 1100 | 338 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.952 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 25.9 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.9 | 4.4 | |
| Peak Hour Factor | 0.89 | 0.67 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1236 | 585 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1821 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

Area Type: Other

Control Type: Unsignalized

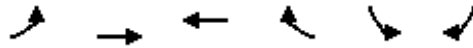
Intersection Capacity Utilization 46.3%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
23: Rua Proença

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 1845 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 1845 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.56 | 0.96 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 153 | 366 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 153 | 366 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.6% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 670 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2677 | 1805 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2677 | 1805 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.56 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 761 | 153 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 761 | 153 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 339 | 1178 | 0 | 0 | 0 | 0 | 0 | 1224 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.976 | | | | |
| Flt Protected | | 0.989 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3500 | 0 | 0 | 0 | 0 | 0 | 4769 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.989 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3500 | 0 | 0 | 0 | 0 | 0 | 4769 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.80 | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.88 | 0.78 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 424 | 1550 | 0 | 0 | 0 | 0 | 0 | 1391 | 266 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1974 | 0 | 0 | 0 | 0 | 0 | 1657 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 23.0 | 23.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 43.4% | 43.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 56.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 25.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 25.0 | | | | |
| Actuated g/C Ratio | | 0.30 | | | | | | 0.47 | | | | |
| v/c Ratio | | 1.87 | | | | | | 0.74 | | | | |
| Control Delay | | 414.3 | | | | | | 13.8 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 414.3 | | | | | | 13.8 | | | | |
| LOS | | F | | | | | | B | | | | |
| Approach Delay | | 414.3 | | | | | | 13.8 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | | B | | | | | |

Intersection Summary

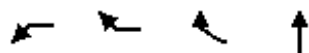
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 53 |
| Actuated Cycle Length: | 53 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 120 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.87 |
| Intersection Signal Delay: | 231.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 80.7% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

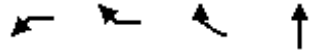


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 1197 | 662 | 270 | 2064 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.974 | 0.850 | | |
| Flt Protected | 0.960 | | | |
| Satd. Flow (prot) | 3401 | 1416 | 0 | 5136 |
| Flt Permitted | 0.960 | | | |
| Satd. Flow (perm) | 3401 | 1416 | 0 | 5136 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.85 | 0.88 | 0.82 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 1408 | 752 | 329 | 2400 |
| Shared Lane Traffic (%) | | 40% | | |
| Lane Group Flow (vph) | 1709 | 780 | 0 | 2400 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | NA | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 30.0 | 30.0 | 0.0 | 73.0 |
| Total Split (%) | 29.1% | 29.1% | 0.0% | 70.9% |
| Maximum Green (s) | 25.0 | 25.0 | | 68.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 25.0 | 25.0 | | 68.0 |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.66 |
| v/c Ratio | 2.07 | 2.27 | | 0.71 |
| Control Delay | 510.4 | 601.9 | | 12.6 |
| Queue Delay | 0.0 | 0.0 | | 109.7 |
| Total Delay | 510.4 | 601.9 | | 122.4 |
| LOS | F | F | | F |
| Approach Delay | 539.1 | | | 122.4 |

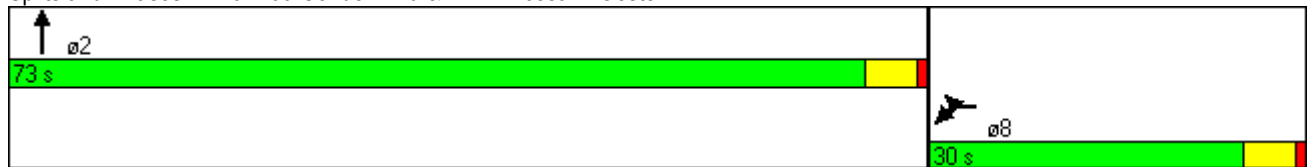


| Lane Group | WBL | WBR | WBR2 | NBT |
|--------------|-----|-----|------|-----|
| Approach LOS | F | | | F |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 103 |
| Actuated Cycle Length: | 103 |
| Offset: | 2 (2%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.27 |
| Intersection Signal Delay: | 334.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 92.1% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1931 | 2627 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3398 | 5033 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3398 | 5033 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.86 | 0.90 | |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 100% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2245 | 2919 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2245 | 2919 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 98.0 | 98.0 | 8.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 92.5% | 92.5% | 8% |
| Maximum Green (s) | | | | | 92.0 | 92.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 92.0 | 92.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.76 | 0.67 | |
| Control Delay | | | | | 4.8 | 3.1 | |
| Queue Delay | | | | | 16.4 | 8.0 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------|-----|-----|-----|-----|------|------|-----|
| Total Delay | | | | | 21.2 | 11.1 | |
| LOS | | | | | C | B | |
| Approach Delay | | | | | | 15.5 | |
| Approach LOS | | | | | | B | |

Intersection Summary

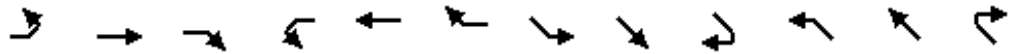
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 5 (5%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.76 |
| Intersection Signal Delay: | 15.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 69.5% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

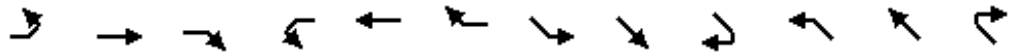
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 2163 | 0 | 0 | 1423 | 247 | 0 | 0 | 0 | 564 | 310 | 303 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.974 | | | | | | 0.967 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4885 | 0 | 0 | 4744 | 0 | 0 | 0 | 0 | 1805 | 1695 | 1490 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4885 | 0 | 0 | 4744 | 0 | 0 | 0 | 0 | 1805 | 1695 | 1490 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.92 | 0.80 | 0.92 | 0.92 | 0.85 | 0.71 | 0.92 | 0.92 | 0.92 | 0.81 | 0.84 | 0.67 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 3% | 3% |
| Adj. Flow (vph) | 0 | 2704 | 0 | 0 | 1942 | 404 | 0 | 0 | 0 | 696 | 369 | 525 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 20% |
| Lane Group Flow (vph) | 0 | 2704 | 0 | 0 | 2346 | 0 | 0 | 0 | 0 | 696 | 474 | 420 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 0.0 | 81.0 | 0.0 | 0.0 | 76.0 | 0.0 | 0.0 | 0.0 | 0.0 | 45.0 | 45.0 | 45.0 |
| Total Split (%) | 0.0% | 64.3% | 0.0% | 0.0% | 60.3% | 0.0% | 0.0% | 0.0% | 0.0% | 35.7% | 35.7% | 35.7% |
| Maximum Green (s) | | 76.0 | | | 72.0 | | | | | 40.0 | 40.0 | 40.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 76.0 | | | 77.0 | | | | | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | | 0.60 | | | 0.61 | | | | | 0.32 | 0.32 | 0.32 |
| v/c Ratio | | 0.92 | | | 0.81 | | | | | 1.21 | 0.88 | 0.89 |
| Control Delay | | 10.0 | | | 21.7 | | | | | 149.8 | 59.9 | 62.9 |
| Queue Delay | | 109.3 | | | 0.2 | | | | | 573.3 | 588.5 | 558.0 |
| Total Delay | | 119.3 | | | 22.0 | | | | | 723.1 | 648.4 | 620.9 |
| LOS | | F | | | C | | | | | F | F | F |
| Approach Delay | | 119.3 | | | 22.0 | | | | | | 673.8 | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | | F | | | C | | | | | | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 126 |
| Actuated Cycle Length: | 126 |
| Offset: | 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 110 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.21 |
| Intersection Signal Delay: | 217.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 174.5% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

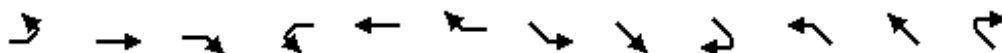
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

| | | | |
|------|----|------|----|
| | ø2 | | ø4 |
| 45 s | | 81 s | |
| | | | ø8 |
| | | 76 s | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016

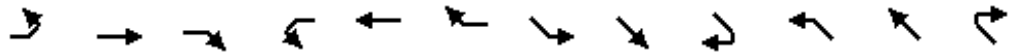


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | | ↕↕ | |
| Volume (vph) | 823 | 239 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 347 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.977 | |
| Flt Protected | | 0.964 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3421 | 0 |
| Flt Permitted | | 0.964 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3421 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.80 | 0.83 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.82 | 0.68 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 0% | 0% |
| Adj. Flow (vph) | 1029 | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 491 | 90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 581 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 106.0 | 106.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 22.0 | 0.0 |
| Total Split (%) | 82.8% | 82.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 17.2% | 0.0% |
| Maximum Green (s) | 102.0 | 102.0 | | | | | | | | | 17.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 102.0 | | | | | | | | | 17.0 | |
| Actuated g/C Ratio | | 0.80 | | | | | | | | | 0.13 | |
| v/c Ratio | | 0.50 | | | | | | | | | 1.28 | |
| Control Delay | | 5.1 | | | | | | | | | 186.0 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.0 | |
| Total Delay | | 5.1 | | | | | | | | | 186.0 | |
| LOS | | A | | | | | | | | | F | |
| Approach Delay | | 5.1 | | | | | | | | | 186.0 | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | A | | | | | | | | | F | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 128 |
| Actuated Cycle Length: | 128 |
| Offset: | 44 (34%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.28 |
| Intersection Signal Delay: | 59.2 |
| Intersection Capacity Utilization | 66.2% |
| Analysis Period (min) | 15 |
| Intersection LOS: | E |
| ICU Level of Service | C |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

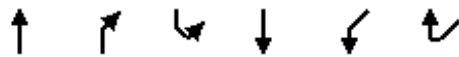
06/05/2016

| | ↑ | ↶ | ↷ | ↓ | ↶ | ↷ |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | | | | ↑↑ | | ↶↶ |
| Volume (vph) | 0 | 0 | 0 | 1430 | 0 | 597 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3503 | 0 | 2758 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3503 | 0 | 2758 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 218.0 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.7 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.88 | 0.92 | 0.71 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1625 | 0 | 841 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1625 | 0 | 841 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 42.9% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

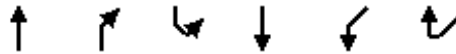


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 2801 | 1473 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.941 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4765 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4765 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.94 | 0.77 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2980 | 1913 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4893 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 0.95 | 0.95 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 98.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Total Split (%) | 92.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8% |
| Maximum Green (s) | 92.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 92.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.38dr | | | | | | |
| Control Delay | 97.9 | | | | | | |
| Queue Delay | 0.0 | | | | | | |
| Total Delay | 97.9 | | | | | | |
| LOS | F | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------|------|-----|-----|-----|-----|-----|-----|
| Approach Delay | 97.9 | | | | | | |
| Approach LOS | F | | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 92 (87%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.18 |
| Intersection Signal Delay: | 97.9 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 92.1% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 392 | 259 | 0 | 2801 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.967 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3252 | 1440 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3252 | 1440 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.84 | 0.92 | 0.83 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 422 | 358 | 0 | 3375 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 33% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 540 | 240 | 0 | 3375 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | Perm | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 15.0 | 34.0 | 34.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 30.6% | 30.6% | 69.4% | 69.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 28.0 | 28.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 28.0 | | | | |
| Actuated g/C Ratio | | | | | 0.20 | 0.20 | | 0.57 | | | | |
| v/c Ratio | | | | | 0.81 | 0.82 | | 1.17 | | | | |
| Control Delay | | | | | 31.2 | 44.9 | | 97.5 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 130.6 | | | | |
| Total Delay | | | | | 31.2 | 44.9 | | 228.1 | | | | |
| LOS | | | | | C | D | | F | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

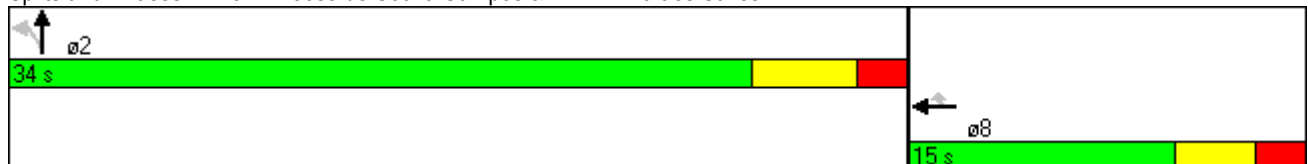


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|-----|-----|-----|------|-----|-----|-------|-----|-----|-----|-----|
| Approach Delay | | | | | 35.4 | | | 228.1 | | | | |
| Approach LOS | | | | | D | | | F | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 49 |
| Actuated Cycle Length: | 49 |
| Offset: | 5 (10%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.17 |
| Intersection Signal Delay: | 192.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 92.1% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|--------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 1057 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.927 | |
| Flt Protected | 0.950 | 0.988 | 0.950 | | |
| Satd. Flow (prot) | 1626 | 3383 | 1698 | 4501 | 0 |
| Flt Permitted | 0.950 | 0.988 | 0.950 | | |
| Satd. Flow (perm) | 1626 | 3383 | 1698 | 4501 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 215.8 | |
| Travel Time (s) | | 2.4 | | 15.5 | |
| Peak Hour Factor | 0.29 | 0.90 | 0.89 | 0.95 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 576 | 610 | 869 | 1217 | 1149 |
| Shared Lane Traffic (%) | 33% | | | | |
| Lane Group Flow (vph) | 386 | 800 | 869 | 2366 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | 0.0 |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | 0.0% |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 1.23 | 1.23 | 0.68 | 1.02dr | |
| Control Delay | 174.3 | 161.8 | 12.4 | 10.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |

Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------|-------|-------|------|------|-----|
| Total Delay | 174.3 | 161.8 | 12.4 | 10.6 | |
| LOS | F | F | B | B | |
| Approach Delay | | 165.9 | | 11.1 | |
| Approach LOS | | F | | B | |

Intersection Summary

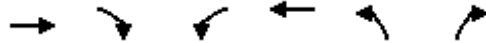
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 5 (4%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 52.6 Intersection LOS: D
 Intersection Capacity Utilization 67.9% ICU Level of Service C
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 06/05/2016

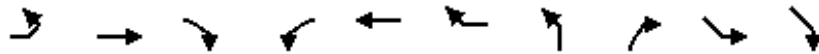


| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1558 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.993 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 5054 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 5054 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.89 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1751 | 86 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1837 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.5% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coimbra



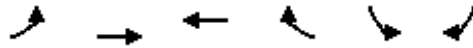
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1807 | 1551 | 3467 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1807 | 1551 | 3467 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.44 | 0.67 | 0.89 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 18 | 107 | 869 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 18 | 107 | 869 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 5036 | 0 | 0 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 5036 | 0 | 0 | 1805 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.44 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 778 | 0 | 0 | 18 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 778 | 0 | 0 | 18 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 20/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|--------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1558 | 0 | 0 | 2999 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.968 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3610 | 0 | 0 | 4882 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3610 | 0 | 0 | 4882 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.89 | 0.92 | 0.92 | 0.90 | 0.82 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1751 | 0 | 0 | 3332 | 915 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1751 | 0 | 0 | 4247 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | custom | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | 0.0 | 55.0 | 0.0 | 0.0 | 57.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 49.1% | 0.0% | 0.0% | 50.9% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 51.0 | | | 53.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 51.0 | | | 53.0 | | | |
| Actuated g/C Ratio | | 0.46 | | | 0.47 | | | |
| v/c Ratio | | 1.07 | | | 1.84 | | | |
| Control Delay | | 72.4 | | | 402.6 | | | |
| Queue Delay | | 0.0 | | | 73.3 | | | |
| Total Delay | | 72.4 | | | 475.9 | | | |
| LOS | | E | | | F | | | |
| Approach Delay | | | | | 475.9 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 20/05/2016

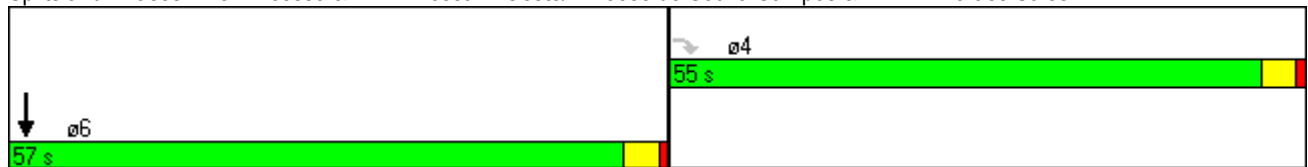


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 112 |
| Actuated Cycle Length: | 112 |
| Offset: | 5 (4%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.84 |
| Intersection Signal Delay: | 358.1 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 117.7% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



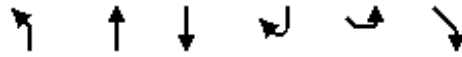
Lanes, Volumes, Timings
 56: Rua Barão de Paranapanema & Acesso

06/05/2016

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↘ | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.55 | 0.82 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 86 | 915 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 86 | 915 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 51.6% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 1431 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4823 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4823 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 194.6 | 27.3 | | 32.7 | |
| Travel Time (s) | | 14.0 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.55 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 110 | 1573 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1683 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 73.6% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1971 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 116.7 | | | 22.0 |
| Travel Time (s) | 2.4 | | 8.4 | | | 1.6 |
| Peak Hour Factor | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 110 | 0 | 0 | 0 | 0 | 2166 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 110 | 0 | 0 | 0 | 0 | 2166 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 73.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service D |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 501 | 0 | 0 | 1563 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 100% | 116% | 116% |
| Adj. Flow (vph) | 539 | 0 | 0 | 1718 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 539 | 0 | 0 | 1718 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | NA | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 23.0 | 0.0 | 0.0 | 84.0 | 0.0 | 0.0 |
| Total Split (%) | 21.5% | 0.0% | 0.0% | 78.5% | 0.0% | 0.0% |
| Maximum Green (s) | 16.0 | | | 79.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 16.0 | | | 79.0 | | |
| Actuated g/C Ratio | 0.15 | | | 0.74 | | |
| v/c Ratio | 1.05 | | | 0.46 | | |
| Control Delay | 98.2 | | | 6.0 | | |
| Queue Delay | 638.5 | | | 20.8 | | |
| Total Delay | 736.8 | | | 26.8 | | |
| LOS | F | | | C | | |
| Approach Delay | 736.8 | | | 26.8 | | |
| Approach LOS | F | | | C | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 107 |
| Actuated Cycle Length: | 107 |
| Offset: | 4 (4%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 196.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 151.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

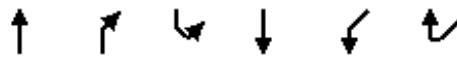
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↗ | |
| Volume (vph) | 0 | 0 | 0 | 2827 | 1197 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5136 | 3467 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5136 | 3467 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.87 | 0.85 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 3249 | 1408 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 3249 | 1408 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 73.0 | 37.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 66.4% | 33.6% | 0.0% |
| Maximum Green (s) | | | | 68.0 | 32.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 68.0 | 32.0 | |
| Actuated g/C Ratio | | | | 0.62 | 0.29 | |
| v/c Ratio | | | | 1.02 | 1.40 | |
| Control Delay | | | | 43.9 | 216.3 | |
| Queue Delay | | | | 222.3 | 0.0 | |
| Total Delay | | | | 266.2 | 216.3 | |
| LOS | | | | F | F | |
| Approach Delay | | | | 266.2 | 216.3 | |
| Approach LOS | | | | F | F | |

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 2 (2%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.40

Intersection Signal Delay: 251.1

Intersection LOS: F

Intersection Capacity Utilization 97.1%

ICU Level of Service F

Analysis Period (min) 15

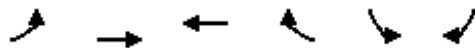
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 567 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.992 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3477 | 0 | 0 | 1644 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3477 | 0 | 0 | 1644 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.88 | 0.25 | 0.92 | 0.79 |
| Growth Factor | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 644 | 37 | 0 | 159 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 681 | 0 | 0 | 159 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|-------|-------|------|-------|------|--------|
| Lane Configurations | ↑↑ | | | | | ↑↑↑ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 3101 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3574 | 0 | 0 | 0 | 0 | 3646 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3574 | 0 | 0 | 0 | 0 | 3646 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 1.00 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1393 | 0 | 0 | 0 | 0 | 3101 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1393 | 0 | 0 | 0 | 0 | 3101 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 55.0 | 0.0 | 0.0 | 0.0 | 0.0 | 34.0 |
| Total Split (%) | 61.8% | 0.0% | 0.0% | 0.0% | 0.0% | 38.2% |
| Maximum Green (s) | 51.0 | | | | | 28.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 51.0 | | | | | 28.0 |
| Actuated g/C Ratio | 0.57 | | | | | 0.31 |
| v/c Ratio | 0.68 | | | | | 2.70 |
| Control Delay | 15.4 | | | | | 787.2 |
| Queue Delay | 210.4 | | | | | 0.0 |
| Total Delay | 225.8 | | | | | 787.2 |
| LOS | F | | | | | F |
| Approach Delay | 225.8 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|--------------|-----|-----|-----|-----|-----|-----|
| Approach LOS | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 89 |
| Actuated Cycle Length: | 89 |
| Offset: | 5 (6%), Referenced to phase 4:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.70 |
| Intersection Signal Delay: | 613.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 117.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Maciel

09/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1947 | 445 | 0 | 2215 | 0 | 186 | 1104 | 95 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3244 | 1398 | 0 | 4838 | 0 | 0 | 3398 | 1552 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3244 | 1398 | 0 | 4838 | 0 | 0 | 3398 | 1552 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.85 | 0.92 | 0.85 | 0.92 | 0.76 | 0.88 | 0.53 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2140 | 607 | 0 | 2606 | 0 | 284 | 1255 | 208 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2201 | 546 | 0 | 2606 | 0 | 0 | 1539 | 208 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 76.0 | 76.0 | 0.0 | 81.0 | 0.0 | 45.0 | 45.0 | 45.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 60.3% | 60.3% | 0.0% | 64.3% | 0.0% | 35.7% | 35.7% | 35.7% | 0.0% | 0.0% |
| Maximum Green (s) | | 72.0 | 72.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 77.0 | 77.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Actuated g/C Ratio | | 0.61 | 0.61 | | 0.60 | | 0.32 | 0.32 | 0.32 | | |
| v/c Ratio | | 1.11 | 0.64 | | 0.89 | | 1.43 | 0.42 | 0.42 | | |
| Control Delay | | 82.8 | 20.0 | | 17.9 | | 231.0 | 37.2 | 37.2 | | |
| Queue Delay | | 45.9 | 0.0 | | 39.0 | | 157.6 | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------|-----|-------|------|-----|------|-----|------|-------|------|-----|-----|
| Total Delay | | 128.8 | 20.0 | | 57.0 | | | 388.6 | 37.2 | | |
| LOS | | F | B | | E | | | F | D | | |
| Approach Delay | | 107.2 | | | 57.0 | | | 346.8 | | | |
| Approach LOS | | F | | | E | | | F | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 126 |
| Actuated Cycle Length: | 126 |
| Offset: | 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.43 |
| Intersection Signal Delay: | 147.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 174.5% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings
71: Av. Guarani & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Volume (vph) | 2427 | 269 | 0 | 2325 | 0 | 352 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 14% | | | 14% | 14% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.980 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4635 | 0 | 0 | 4638 | 0 | 1574 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4635 | 0 | 0 | 4638 | 0 | 1574 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 52.8 | | | 49.8 | 78.3 | |
| Travel Time (s) | 3.8 | | | 3.6 | 5.6 | |
| Peak Hour Factor | 0.93 | 0.69 | 0.92 | 0.85 | 0.92 | 0.88 |
| Growth Factor | 100% | 100% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 2610 | 390 | 0 | 2735 | 0 | 400 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 3000 | 0 | 0 | 2735 | 0 | 400 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | R NA |
| Median Width(m) | 4.8 | | | 4.8 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.10 | 1.10 | 1.10 | 1.10 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 81.3% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

| Intersection | | | | |
|------------------------------|-------|-------|-------|-------|
| Intersection Delay (sec/veh) | 99.3 | | | |
| Intersection LOS | F | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 2 | 2 | 2 | 2 |
| Adjusted Approach Flow (vph) | 771 | 682 | 484 | 970 |
| Demand Flow Rate (pc/h) | 786 | 688 | 489 | 989 |
| Vehicles Circulating (pc/h) | 564 | 699 | 786 | 640 |
| Vehicles Exiting (pc/h) | 1065 | 576 | 564 | 747 |
| Follow-Up Headway (s) | 3.186 | 3.186 | 3.186 | 3.186 |
| Ped Vol. Crossing Leg (#/hr) | 0 | 0 | 0 | 0 |
| Ped Capacity Adjustment | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay (sec/veh) | 65.0 | 57.1 | 24.1 | 193.6 |
| Approach LOS | F | F | C | F |
| Lane | Left | Left | Left | Left |
| Designated moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| Right Turn Channelized | | | | |
| Lane Utilization | 1.000 | 1.000 | 1.000 | 1.000 |
| Critical Headway (s) | 4.113 | 4.113 | 4.113 | 4.113 |
| Entry Flow Rate (pc/h) | 786 | 688 | 489 | 989 |
| Capacity, Entry Lane (pc/h) | 761 | 693 | 652 | 722 |
| Entry HV Adjustment Factor | 0.981 | 0.991 | 0.990 | 0.981 |
| Flow Rate, Entry (vph) | 771 | 682 | 484 | 970 |
| Capacity, Entry (vph) | 747 | 686 | 645 | 708 |
| Volume to Capacity Ratio | 1.032 | 0.993 | 0.750 | 1.370 |
| Control Delay (sec/veh) | 65.0 | 57.1 | 24.1 | 193.6 |
| Level of Service | F | F | C | F |
| 95th-Percentile Queue (veh) | 19 | 16 | 7 | 42 |

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1329 | 1386 | 2715 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.49 |
| Stops (#) | 1329 | 0 | 1329 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 5 | 3 | 8 |
| Distance Traveled (km) | 244 | 151 | 395 |
| Fuel Consumed (l) | 53 | 14 | 67 |
| Fuel Economy (km/l) | 4.6 | 10.5 | 5.9 |
| CO Emissions (kg) | 0.99 | 0.27 | 1.25 |
| NOx Emissions (kg) | 0.19 | 0.05 | 0.24 |
| VOC Emissions (kg) | 0.23 | 0.06 | 0.29 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 1066 | 891 | 147 | 359 | 2463 |
| Control Delay / Veh (s/v) | 144 | 83 | 57 | 467 | 164 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 144 | 83 | 57 | 467 | 164 |
| Total Delay (hr) | 43 | 21 | 2 | 47 | 112 |
| Stops / Veh | 0.82 | 0.84 | 0.86 | 0.81 | 0.83 |
| Stops (#) | 873 | 745 | 126 | 289 | 2033 |
| Average Speed (km/hr) | 4 | 12 | 5 | 1 | 5 |
| Total Travel Time (hr) | 46 | 27 | 3 | 47 | 124 |
| Distance Traveled (km) | 196 | 329 | 13 | 37 | 574 |
| Fuel Consumed (l) | 156 | 105 | 10 | 139 | 411 |
| Fuel Economy (km/l) | 1.3 | 3.1 | 1.2 | 0.3 | 1.4 |
| CO Emissions (kg) | 2.90 | 1.95 | 0.20 | 2.59 | 7.64 |
| NOx Emissions (kg) | 0.56 | 0.38 | 0.04 | 0.50 | 1.47 |
| VOC Emissions (kg) | 0.67 | 0.45 | 0.05 | 0.60 | 1.76 |
| Unserviced Vehicles (#) | 210 | 81 | 0 | 176 | 468 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

3: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 2627 | 2627 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 15 | 15 |
| Distance Traveled (km) | 744 | 744 |
| Fuel Consumed (l) | 71 | 71 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 1.32 | 1.32 |
| NOx Emissions (kg) | 0.25 | 0.25 |
| VOC Emissions (kg) | 0.30 | 0.30 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 545 | 2944 | 3489 |
| Control Delay / Veh (s/v) | 121 | 27 | 42 |
| Queue Delay / Veh (s/v) | 0 | 119 | 100 |
| Total Delay / Veh (s/v) | 121 | 146 | 142 |
| Total Delay (hr) | 18 | 119 | 138 |
| Stops / Veh | 0.85 | 0.80 | 0.81 |
| Stops (#) | 462 | 2352 | 2814 |
| Average Speed (km/hr) | 2 | 1 | 1 |
| Total Travel Time (hr) | 19 | 122 | 141 |
| Distance Traveled (km) | 33 | 133 | 166 |
| Fuel Consumed (l) | 64 | 396 | 460 |
| Fuel Economy (km/l) | 0.5 | 0.3 | 0.4 |
| CO Emissions (kg) | 1.20 | 7.36 | 8.56 |
| NOx Emissions (kg) | 0.23 | 1.42 | 1.65 |
| VOC Emissions (kg) | 0.28 | 1.70 | 1.97 |
| Unserviced Vehicles (#) | 61 | 0 | 61 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | SB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 501 | 4024 | 4525 |
| Control Delay / Veh (s/v) | 77 | 132 | 126 |
| Queue Delay / Veh (s/v) | 0 | 34 | 30 |
| Total Delay / Veh (s/v) | 77 | 166 | 157 |
| Total Delay (hr) | 11 | 186 | 197 |
| Stops / Veh | 0.88 | 0.77 | 0.78 |
| Stops (#) | 442 | 3107 | 3549 |
| Average Speed (km/hr) | 3 | 1 | 2 |
| Total Travel Time (hr) | 11 | 191 | 203 |
| Distance Traveled (km) | 36 | 275 | 311 |
| Fuel Consumed (l) | 43 | 611 | 654 |
| Fuel Economy (km/l) | 0.8 | 0.5 | 0.5 |
| CO Emissions (kg) | 0.80 | 11.37 | 12.17 |
| NOx Emissions (kg) | 0.15 | 2.19 | 2.35 |
| VOC Emissions (kg) | 0.18 | 2.62 | 2.81 |
| Unserviced Vehicles (#) | 0 | 799 | 799 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

| Direction | EB | SB | NW | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 351 | 2484 | 662 | 3497 |
| Control Delay / Veh (s/v) | 0 | 28 | 34 | 27 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 28 | 34 | 27 |
| Total Delay (hr) | 0 | 20 | 6 | 26 |
| Stops / Veh | 0.00 | 0.85 | 0.85 | 0.76 |
| Stops (#) | 0 | 2106 | 563 | 2669 |
| Average Speed (km/hr) | 45 | 13 | 3 | 11 |
| Total Travel Time (hr) | 0 | 26 | 7 | 33 |
| Distance Traveled (km) | 13 | 330 | 21 | 363 |
| Fuel Consumed (l) | 1 | 133 | 32 | 166 |
| Fuel Economy (km/l) | 9.8 | 2.5 | 0.6 | 2.2 |
| CO Emissions (kg) | 0.02 | 2.47 | 0.60 | 3.09 |
| NOx Emissions (kg) | 0.00 | 0.48 | 0.12 | 0.60 |
| VOC Emissions (kg) | 0.01 | 0.57 | 0.14 | 0.71 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

7: Av. Princesa D'Oeste

| Direction | EB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1931 | 2342 | 4273 |
| Control Delay / Veh (s/v) | 114 | 856 | 521 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 114 | 856 | 521 |
| Total Delay (hr) | 61 | 557 | 618 |
| Stops / Veh | 0.83 | 0.69 | 0.75 |
| Stops (#) | 1606 | 1617 | 3223 |
| Average Speed (km/hr) | 1 | 2 | 2 |
| Total Travel Time (hr) | 62 | 578 | 640 |
| Distance Traveled (km) | 46 | 1049 | 1095 |
| Fuel Consumed (l) | 210 | 1678 | 1888 |
| Fuel Economy (km/l) | 0.2 | 0.6 | 0.6 |
| CO Emissions (kg) | 3.91 | 31.21 | 35.12 |
| NOx Emissions (kg) | 0.76 | 6.02 | 6.78 |
| VOC Emissions (kg) | 0.90 | 7.20 | 8.10 |
| Unserviced Vehicles (#) | 302 | 1522 | 1824 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

8: Av. Ayrton Senna da Silva

| Direction | EB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1046 | 1080 | 2126 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 2 | 3 |
| Distance Traveled (km) | 95 | 77 | 173 |
| Fuel Consumed (l) | 9 | 7 | 16 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.17 | 0.14 | 0.30 |
| NOx Emissions (kg) | 0.03 | 0.03 | 0.06 |
| VOC Emissions (kg) | 0.04 | 0.03 | 0.07 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 709 | 550 | 395 | 892 | 2546 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Stops (#) | 709 | 550 | 395 | 892 | 2546 |
| Average Speed (km/hr) | 50 | 50 | 50 | 50 | 50 |
| Total Travel Time (hr) | 5 | 1 | 1 | 2 | 10 |
| Distance Traveled (km) | 261 | 67 | 48 | 124 | 501 |
| Fuel Consumed (l) | 41 | 19 | 13 | 32 | 105 |
| Fuel Economy (km/l) | 6.4 | 3.6 | 3.6 | 3.9 | 4.8 |
| CO Emissions (kg) | 0.76 | 0.35 | 0.25 | 0.59 | 1.95 |
| NOx Emissions (kg) | 0.15 | 0.07 | 0.05 | 0.11 | 0.38 |
| VOC Emissions (kg) | 0.17 | 0.08 | 0.06 | 0.14 | 0.45 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

| Direction | NB | SE | All |
|------------------------------|------|------|------|
| Volume (vph) | 751 | 1620 | 2371 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.32 |
| Stops (#) | 751 | 0 | 751 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 100 | 65 | 165 |
| Fuel Consumed (l) | 26 | 6 | 33 |
| Fuel Economy (km/l) | 3.8 | 10.5 | 5.1 |
| CO Emissions (kg) | 0.49 | 0.12 | 0.61 |
| NOx Emissions (kg) | 0.09 | 0.02 | 0.12 |
| VOC Emissions (kg) | 0.11 | 0.03 | 0.14 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Direction | WB | SB | NE | All |
|------------------------------|------|-------|------|-------|
| Volume (vph) | 392 | 3438 | 1323 | 5153 |
| Control Delay / Veh (s/v) | 16 | 401 | 22 | 274 |
| Queue Delay / Veh (s/v) | 211 | 0 | 182 | 63 |
| Total Delay / Veh (s/v) | 227 | 401 | 203 | 337 |
| Total Delay (hr) | 25 | 383 | 75 | 482 |
| Stops / Veh | 0.56 | 0.69 | 0.70 | 0.68 |
| Stops (#) | 219 | 2356 | 930 | 3505 |
| Average Speed (km/hr) | 1 | 2 | 1 | 2 |
| Total Travel Time (hr) | 25 | 397 | 76 | 498 |
| Distance Traveled (km) | 13 | 703 | 83 | 799 |
| Fuel Consumed (l) | 75 | 1181 | 235 | 1491 |
| Fuel Economy (km/l) | 0.2 | 0.6 | 0.4 | 0.5 |
| CO Emissions (kg) | 1.39 | 21.97 | 4.38 | 27.74 |
| NOx Emissions (kg) | 0.27 | 4.24 | 0.85 | 5.35 |
| VOC Emissions (kg) | 0.32 | 5.07 | 1.01 | 6.40 |
| Unserviced Vehicles (#) | 0 | 1564 | 0 | 1564 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1492 | 1492 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 51 | 51 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 48 | 48 |
| Fuel Consumed (l) | 5 | 5 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.09 | 0.09 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

23: Rua Proença

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 437 | 437 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 42 | 42 |
| Fuel Consumed (l) | 4 | 4 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.07 | 0.07 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

24: Rua Barão de Paranapanema

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 670 | 86 | 756 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 22 | 2 | 24 |
| Fuel Consumed (l) | 2 | 0 | 2 |
| Fuel Economy (km/l) | 10.5 | NA | 10.5 |
| CO Emissions (kg) | 0.04 | 0.00 | 0.04 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

25: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | EB | NB | All |
|------------------------------|------|------|-------|
| Volume (vph) | 1517 | 1432 | 2949 |
| Control Delay / Veh (s/v) | 414 | 14 | 220 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 414 | 14 | 220 |
| Total Delay (hr) | 175 | 5 | 180 |
| Stops / Veh | 0.84 | 0.75 | 0.79 |
| Stops (#) | 1270 | 1068 | 2338 |
| Average Speed (km/hr) | 0 | 6 | 0 |
| Total Travel Time (hr) | 176 | 6 | 182 |
| Distance Traveled (km) | 48 | 39 | 87 |
| Fuel Consumed (l) | 517 | 43 | 559 |
| Fuel Economy (km/l) | 0.1 | 0.9 | 0.2 |
| CO Emissions (kg) | 9.61 | 0.80 | 10.41 |
| NOx Emissions (kg) | 1.85 | 0.15 | 2.01 |
| VOC Emissions (kg) | 2.22 | 0.18 | 2.40 |
| Unserviced Vehicles (#) | 705 | 0 | 705 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

26: Rua Conde D'Eu & Av. Princesa D'Oeste

| Direction | WB | NB | All |
|------------------------------|-------|------|-------|
| Volume (vph) | 2129 | 2064 | 4193 |
| Control Delay / Veh (s/v) | 539 | 13 | 280 |
| Queue Delay / Veh (s/v) | 0 | 110 | 54 |
| Total Delay / Veh (s/v) | 539 | 122 | 334 |
| Total Delay (hr) | 319 | 70 | 389 |
| Stops / Veh | 0.68 | 0.60 | 0.64 |
| Stops (#) | 1454 | 1231 | 2685 |
| Average Speed (km/hr) | 1 | 2 | 1 |
| Total Travel Time (hr) | 323 | 73 | 396 |
| Distance Traveled (km) | 230 | 142 | 372 |
| Fuel Consumed (l) | 938 | 235 | 1173 |
| Fuel Economy (km/l) | 0.2 | 0.6 | 0.3 |
| CO Emissions (kg) | 17.44 | 4.38 | 21.82 |
| NOx Emissions (kg) | 3.37 | 0.85 | 4.21 |
| VOC Emissions (kg) | 4.02 | 1.01 | 5.03 |
| Unserviced Vehicles (#) | 1129 | 0 | 1129 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

28: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 4558 | 4558 |
| Control Delay / Veh (s/v) | 4 | 4 |
| Queue Delay / Veh (s/v) | 12 | 12 |
| Total Delay / Veh (s/v) | 15 | 15 |
| Total Delay (hr) | 19 | 19 |
| Stops / Veh | 0.29 | 0.29 |
| Stops (#) | 1317 | 1317 |
| Average Speed (km/hr) | 14 | 14 |
| Total Travel Time (hr) | 27 | 27 |
| Distance Traveled (km) | 375 | 375 |
| Fuel Consumed (l) | 119 | 119 |
| Fuel Economy (km/l) | 3.1 | 3.1 |
| CO Emissions (kg) | 2.21 | 2.21 |
| NOx Emissions (kg) | 0.43 | 0.43 |
| VOC Emissions (kg) | 0.51 | 0.51 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

| Direction | EB | WB | NW | All |
|------------------------------|------|------|-------|-------|
| Volume (vph) | 2163 | 1938 | 1225 | 5326 |
| Control Delay / Veh (s/v) | 10 | 22 | 102 | 35 |
| Queue Delay / Veh (s/v) | 109 | 0 | 575 | 177 |
| Total Delay / Veh (s/v) | 119 | 22 | 676 | 212 |
| Total Delay (hr) | 72 | 12 | 230 | 314 |
| Stops / Veh | 0.58 | 0.74 | 0.85 | 0.70 |
| Stops (#) | 1250 | 1431 | 1045 | 3726 |
| Average Speed (km/hr) | 2 | 20 | 0 | 2 |
| Total Travel Time (hr) | 74 | 19 | 231 | 325 |
| Distance Traveled (km) | 127 | 383 | 51 | 561 |
| Fuel Consumed (l) | 239 | 101 | 666 | 1006 |
| Fuel Economy (km/l) | 0.5 | 3.8 | 0.1 | 0.6 |
| CO Emissions (kg) | 4.44 | 1.88 | 12.39 | 18.71 |
| NOx Emissions (kg) | 0.86 | 0.36 | 2.39 | 3.61 |
| VOC Emissions (kg) | 1.02 | 0.43 | 2.86 | 4.31 |
| Unserviced Vehicles (#) | 0 | 0 | 100 | 100 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1100 | 464 | 1564 |
| Control Delay / Veh (s/v) | 5 | 186 | 59 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 5 | 186 | 59 |
| Total Delay (hr) | 2 | 24 | 26 |
| Stops / Veh | 0.30 | 0.80 | 0.45 |
| Stops (#) | 333 | 371 | 704 |
| Average Speed (km/hr) | 13 | 1 | 2 |
| Total Travel Time (hr) | 2 | 25 | 27 |
| Distance Traveled (km) | 28 | 37 | 65 |
| Fuel Consumed (l) | 14 | 78 | 93 |
| Fuel Economy (km/l) | 2.0 | 0.5 | 0.7 |
| CO Emissions (kg) | 0.27 | 1.46 | 1.72 |
| NOx Emissions (kg) | 0.05 | 0.28 | 0.33 |
| VOC Emissions (kg) | 0.06 | 0.34 | 0.40 |
| Unserviced Vehicles (#) | 0 | 101 | 101 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

37: Av. Dr. Jesuino Marcondes Machado

| Direction | SB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1430 | 597 | 2027 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 6 | 1 | 7 |
| Distance Traveled (km) | 312 | 35 | 347 |
| Fuel Consumed (l) | 30 | 3 | 33 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.55 | 0.06 | 0.61 |
| NOx Emissions (kg) | 0.11 | 0.01 | 0.12 |
| VOC Emissions (kg) | 0.13 | 0.01 | 0.14 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 4274 | 4274 |
| Control Delay / Veh (s/v) | 98 | 98 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 98 | 98 |
| Total Delay (hr) | 116 | 116 |
| Stops / Veh | 0.71 | 0.71 |
| Stops (#) | 3028 | 3028 |
| Average Speed (km/hr) | 2 | 2 |
| Total Travel Time (hr) | 122 | 122 |
| Distance Traveled (km) | 286 | 286 |
| Fuel Consumed (l) | 417 | 417 |
| Fuel Economy (km/l) | 0.7 | 0.7 |
| CO Emissions (kg) | 7.76 | 7.76 |
| NOx Emissions (kg) | 1.50 | 1.50 |
| VOC Emissions (kg) | 1.79 | 1.79 |
| Unserviced Vehicles (#) | 661 | 661 |
| Vehicles in dilemma zone (#) | 0 | 0 |

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | WB | NB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 694 | 2801 | 3495 |
| Control Delay / Veh (s/v) | 35 | 98 | 85 |
| Queue Delay / Veh (s/v) | 0 | 131 | 105 |
| Total Delay / Veh (s/v) | 35 | 228 | 190 |
| Total Delay (hr) | 7 | 178 | 184 |
| Stops / Veh | 0.84 | 0.80 | 0.81 |
| Stops (#) | 584 | 2234 | 2818 |
| Average Speed (km/hr) | 6 | 1 | 1 |
| Total Travel Time (hr) | 8 | 181 | 189 |
| Distance Traveled (km) | 49 | 177 | 226 |
| Fuel Consumed (l) | 36 | 559 | 595 |
| Fuel Economy (km/l) | 1.3 | 0.3 | 0.4 |
| CO Emissions (kg) | 0.68 | 10.39 | 11.07 |
| NOx Emissions (kg) | 0.13 | 2.01 | 2.14 |
| VOC Emissions (kg) | 0.16 | 2.40 | 2.55 |
| Unserviced Vehicles (#) | 0 | 414 | 414 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| Direction | EB | NE | All |
|------------------------------|------|------|------|
| Volume (vph) | 716 | 2986 | 3702 |
| Control Delay / Veh (s/v) | 164 | 11 | 41 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 164 | 11 | 41 |
| Total Delay (hr) | 33 | 9 | 42 |
| Stops / Veh | 0.82 | 0.49 | 0.56 |
| Stops (#) | 585 | 1475 | 2060 |
| Average Speed (km/hr) | 1 | 29 | 12 |
| Total Travel Time (hr) | 33 | 22 | 55 |
| Distance Traveled (km) | 24 | 644 | 668 |
| Fuel Consumed (l) | 106 | 120 | 225 |
| Fuel Economy (km/l) | 0.2 | 5.4 | 3.0 |
| CO Emissions (kg) | 1.96 | 2.23 | 4.19 |
| NOx Emissions (kg) | 0.38 | 0.43 | 0.81 |
| VOC Emissions (kg) | 0.45 | 0.51 | 0.97 |
| Unserviced Vehicles (#) | 133 | 0 | 133 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1606 | 1606 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 64 | 64 |
| Fuel Consumed (l) | 6 | 6 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.11 | 0.11 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.03 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coutinho

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 80 | 773 | 853 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.09 |
| Stops (#) | 80 | 0 | 80 |
| Average Speed (km/hr) | 50 | 51 | 51 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 4 | 26 | 31 |
| Fuel Consumed (l) | 2 | 2 | 5 |
| Fuel Economy (km/l) | 2.0 | 10.5 | 6.5 |
| CO Emissions (kg) | 0.04 | 0.05 | 0.09 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.02 |
| VOC Emissions (kg) | 0.01 | 0.01 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

53: Av. Dr. Moraes Salles & Retorno

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 708 | 8 | 716 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.01 |
| Stops (#) | 0 | 8 | 8 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 29 | 0 | 29 |
| Fuel Consumed (l) | 3 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 9.9 |
| CO Emissions (kg) | 0.05 | 0.00 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales

| Direction | EB | SB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1558 | 3749 | 5307 |
| Control Delay / Veh (s/v) | 72 | 403 | 306 |
| Queue Delay / Veh (s/v) | 0 | 73 | 52 |
| Total Delay / Veh (s/v) | 72 | 476 | 357 |
| Total Delay (hr) | 31 | 496 | 527 |
| Stops / Veh | 0.87 | 0.67 | 0.73 |
| Stops (#) | 1360 | 2524 | 3884 |
| Average Speed (km/hr) | 2 | 0 | 1 |
| Total Travel Time (hr) | 33 | 500 | 533 |
| Distance Traveled (km) | 63 | 220 | 283 |
| Fuel Consumed (l) | 123 | 1451 | 1574 |
| Fuel Economy (km/l) | 0.5 | 0.2 | 0.2 |
| CO Emissions (kg) | 2.29 | 26.98 | 29.27 |
| NOx Emissions (kg) | 0.44 | 5.21 | 5.65 |
| VOC Emissions (kg) | 0.53 | 6.22 | 6.75 |
| Unserviced Vehicles (#) | 95 | 1710 | 1805 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

56: Rua Barão de Paranapanema & Acesso

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 47 | 750 | 797 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.94 |
| Stops (#) | 0 | 750 | 750 |
| Average Speed (km/hr) | 50 | 49 | 49 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 26 | 28 |
| Fuel Consumed (l) | 0 | 19 | 19 |
| Fuel Economy (km/l) | NA | 1.3 | 1.4 |
| CO Emissions (kg) | 0.00 | 0.36 | 0.36 |
| NOx Emissions (kg) | 0.00 | 0.07 | 0.07 |
| VOC Emissions (kg) | 0.00 | 0.08 | 0.08 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

59: Av. Princesa D'Oeste & retorno

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 1492 | 1492 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 6 | 6 |
| Distance Traveled (km) | 290 | 290 |
| Fuel Consumed (l) | 28 | 28 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.51 | 0.51 |
| NOx Emissions (kg) | 0.10 | 0.10 |
| VOC Emissions (kg) | 0.12 | 0.12 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

61: Av. Princesa D'Oeste & retorno

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 60 | 1971 | 2031 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.03 |
| Stops (#) | 60 | 0 | 60 |
| Average Speed (km/hr) | 49 | 50 | 49 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 43 | 45 |
| Fuel Consumed (l) | 2 | 4 | 6 |
| Fuel Economy (km/l) | 1.3 | 10.5 | 8.0 |
| CO Emissions (kg) | 0.03 | 0.08 | 0.11 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.02 |
| VOC Emissions (kg) | 0.01 | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 501 | 1563 | 2064 |
| Control Delay / Veh (s/v) | 98 | 6 | 28 |
| Queue Delay / Veh (s/v) | 639 | 21 | 171 |
| Total Delay / Veh (s/v) | 737 | 27 | 199 |
| Total Delay (hr) | 103 | 12 | 114 |
| Stops / Veh | 0.86 | 0.36 | 0.48 |
| Stops (#) | 433 | 560 | 993 |
| Average Speed (km/hr) | 0 | 8 | 1 |
| Total Travel Time (hr) | 103 | 14 | 117 |
| Distance Traveled (km) | 18 | 106 | 124 |
| Fuel Consumed (l) | 295 | 55 | 350 |
| Fuel Economy (km/l) | 0.1 | 1.9 | 0.4 |
| CO Emissions (kg) | 5.50 | 1.02 | 6.52 |
| NOx Emissions (kg) | 1.06 | 0.20 | 1.26 |
| VOC Emissions (kg) | 1.27 | 0.24 | 1.50 |
| Unserviced Vehicles (#) | 24 | 0 | 24 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

63: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | SB | SW | All |
|------------------------------|-------|------|-------|
| Volume (vph) | 2827 | 1197 | 4024 |
| Control Delay / Veh (s/v) | 44 | 216 | 95 |
| Queue Delay / Veh (s/v) | 222 | 0 | 156 |
| Total Delay / Veh (s/v) | 266 | 216 | 251 |
| Total Delay (hr) | 209 | 72 | 281 |
| Stops / Veh | 0.86 | 0.77 | 0.83 |
| Stops (#) | 2435 | 918 | 3353 |
| Average Speed (km/hr) | 1 | 1 | 1 |
| Total Travel Time (hr) | 211 | 73 | 284 |
| Distance Traveled (km) | 113 | 38 | 150 |
| Fuel Consumed (l) | 644 | 223 | 868 |
| Fuel Economy (km/l) | 0.2 | 0.2 | 0.2 |
| CO Emissions (kg) | 11.98 | 4.15 | 16.14 |
| NOx Emissions (kg) | 2.31 | 0.80 | 3.12 |
| VOC Emissions (kg) | 2.76 | 0.96 | 3.72 |
| Unserviced Vehicles (#) | 64 | 339 | 404 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 576 | 126 | 702 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.18 |
| Stops (#) | 0 | 126 | 126 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 35 | 11 | 46 |
| Fuel Consumed (l) | 3 | 4 | 7 |
| Fuel Economy (km/l) | 10.5 | 2.9 | 6.4 |
| CO Emissions (kg) | 0.06 | 0.07 | 0.13 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.03 |
| VOC Emissions (kg) | 0.01 | 0.02 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

66: Av. José de Souza Campos

| Direction | NB | NW | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1323 | 3101 | 4424 |
| Control Delay / Veh (s/v) | 15 | 787 | 556 |
| Queue Delay / Veh (s/v) | 210 | 0 | 63 |
| Total Delay / Veh (s/v) | 226 | 787 | 619 |
| Total Delay (hr) | 83 | 678 | 761 |
| Stops / Veh | 0.66 | 0.75 | 0.72 |
| Stops (#) | 876 | 2320 | 3196 |
| Average Speed (km/hr) | 1 | 0 | 0 |
| Total Travel Time (hr) | 84 | 681 | 765 |
| Distance Traveled (km) | 54 | 122 | 177 |
| Fuel Consumed (l) | 255 | 1942 | 2197 |
| Fuel Economy (km/l) | 0.2 | 0.1 | 0.1 |
| CO Emissions (kg) | 4.74 | 36.13 | 40.86 |
| NOx Emissions (kg) | 0.91 | 6.97 | 7.89 |
| VOC Emissions (kg) | 1.09 | 8.33 | 9.42 |
| Unserviced Vehicles (#) | 0 | 1954 | 1954 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | SB | All |
|------------------------------|------|------|------|-------|
| Volume (vph) | 2463 | 2215 | 1430 | 6108 |
| Control Delay / Veh (s/v) | 71 | 18 | 216 | 86 |
| Queue Delay / Veh (s/v) | 37 | 39 | 146 | 63 |
| Total Delay / Veh (s/v) | 108 | 57 | 362 | 149 |
| Total Delay (hr) | 74 | 35 | 144 | 253 |
| Stops / Veh | 0.81 | 0.89 | 0.75 | 0.82 |
| Stops (#) | 1985 | 1962 | 1075 | 5022 |
| Average Speed (km/hr) | 6 | 3 | 1 | 3 |
| Total Travel Time (hr) | 84 | 38 | 145 | 267 |
| Distance Traveled (km) | 480 | 130 | 91 | 700 |
| Fuel Consumed (l) | 295 | 153 | 431 | 879 |
| Fuel Economy (km/l) | 1.6 | 0.8 | 0.2 | 0.8 |
| CO Emissions (kg) | 5.49 | 2.85 | 8.01 | 16.35 |
| NOx Emissions (kg) | 1.06 | 0.55 | 1.55 | 3.16 |
| VOC Emissions (kg) | 1.27 | 0.66 | 1.85 | 3.77 |
| Unserved Vehicles (#) | 199 | 0 | 395 | 593 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

71: Av. Guarani & Av. Dr. Moraes Salles

| Direction | EB | WB | NB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 2696 | 2325 | 352 | 5373 |
| Control Delay / Veh (s/v) | 0 | 0 | 425 | 28 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 425 | 28 |
| Total Delay (hr) | 0 | 0 | 42 | 42 |
| Stops / Veh | 0.00 | 0.00 | 1.00 | 0.07 |
| Stops (#) | 0 | 0 | 352 | 352 |
| Average Speed (km/hr) | 50 | 50 | 1 | 12 |
| Total Travel Time (hr) | 3 | 9 | 42 | 54 |
| Distance Traveled (km) | 142 | 453 | 28 | 623 |
| Fuel Consumed (l) | 14 | 43 | 126 | 182 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 0.2 | 3.4 |
| CO Emissions (kg) | 0.25 | 0.80 | 2.34 | 3.39 |
| NOx Emissions (kg) | 0.05 | 0.15 | 0.45 | 0.65 |
| VOC Emissions (kg) | 0.06 | 0.18 | 0.54 | 0.78 |
| Unserved Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

Network Totals

| | |
|------------------------------|--------|
| Number of Intersections | 36 |
| Control Delay / Veh (s/v) | 123 |
| Queue Delay / Veh (s/v) | 41 |
| Total Delay / Veh (s/v) | 164 |
| Total Delay (hr) | 4820 |
| Stops / Veh | 0.56 |
| Stops (#) | 58919 |
| Average Speed (km/hr) | 2 |
| Total Travel Time (hr) | 5040 |
| Distance Traveled (km) | 10980 |
| Fuel Consumed (l) | 15718 |
| Fuel Economy (km/l) | 0.7 |
| CO Emissions (kg) | 292.35 |
| NOx Emissions (kg) | 56.43 |
| VOC Emissions (kg) | 67.43 |
| Unserved Vehicles (#) | 12738 |
| Vehicles in dilemma zone (#) | 0 |
| Performance Index | 4984.0 |

Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 740 | 697 | 457 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.953 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2787 | 3373 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2787 | 3373 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 100% | 116% | 116% |
| Adj. Flow (vph) | 0 | 804 | 1078 | 497 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 804 | 1575 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.0 | | 4.0 | | | 4.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 73.9% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 507 | 497 | 20 | 111 | 599 | 19 | 29 | 138 | 17 | 57 | 102 | 239 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.980 | | | 0.922 | |
| Flt Protected | | 0.979 | | | 0.990 | | | 0.991 | | | 0.988 | |
| Satd. Flow (prot) | 0 | 3290 | 0 | 0 | 3361 | 0 | 0 | 3302 | 0 | 0 | 3140 | 0 |
| Flt Permitted | | 0.979 | | | 0.990 | | | 0.642 | | | 0.758 | |
| Satd. Flow (perm) | 0 | 3290 | 0 | 0 | 3361 | 0 | 0 | 2139 | 0 | 0 | 2409 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 86.2 | | | 97.6 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 6.2 | | | 7.0 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.42 | 0.66 | 0.84 | 0.69 | 0.81 | 0.81 | 0.61 | 0.40 | 0.70 | 0.76 |
| Growth Factor | 100% | 116% | 116% | 116% | 100% | 100% | 116% | 100% | 116% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 551 | 655 | 55 | 195 | 713 | 28 | 42 | 170 | 32 | 142 | 146 | 314 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1261 | 0 | 0 | 936 | 0 | 0 | 244 | 0 | 0 | 602 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (m) | 2.0 | 10.0 | | 2.0 | 10.0 | | 2.0 | 10.0 | | 2.0 | 10.0 | |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Size(m) | 2.0 | 0.6 | | 2.0 | 0.6 | | 2.0 | 0.6 | | 2.0 | 0.6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | 9.4 | | | 9.4 | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | 0.6 | | | 0.6 | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 3 | 3 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 58.0 | 58.0 | 0.0 | 44.0 | 44.0 | 0.0 | 38.0 | 38.0 | 0.0 | 38.0 | 38.0 | 0.0 |

Lanes, Volumes, Timings
 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016

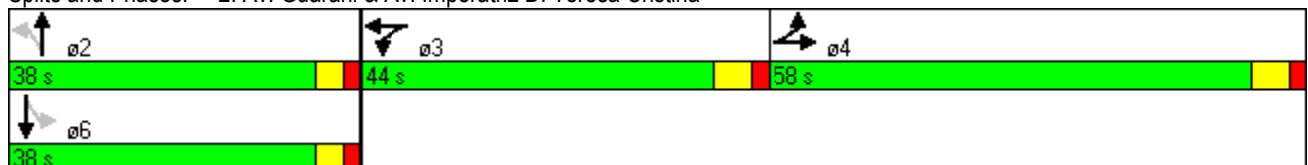


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Total Split (%) | 41.4% | 41.4% | 0.0% | 31.4% | 31.4% | 0.0% | 27.1% | 27.1% | 0.0% | 27.1% | 27.1% | 0.0% |
| Maximum Green (s) | 52.0 | 52.0 | | 38.0 | 38.0 | | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 4.0 | 6.0 | 6.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 52.0 | | | 38.0 | | | 33.0 | | | 33.0 | |
| Actuated g/C Ratio | | 0.37 | | | 0.27 | | | 0.24 | | | 0.24 | |
| v/c Ratio | | 1.03 | | | 1.03 | | | 0.48 | | | 1.06 | |
| Control Delay | | 77.2 | | | 86.3 | | | 50.0 | | | 105.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 77.2 | | | 86.3 | | | 50.0 | | | 105.1 | |
| LOS | | E | | | F | | | D | | | F | |
| Approach Delay | | 77.2 | | | 86.3 | | | 50.0 | | | 105.1 | |
| Approach LOS | | E | | | F | | | D | | | F | |

Intersection Summary

| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Natural Cycle: | 140 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 83.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 88.2% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1649 | 141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.988 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4924 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4924 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 100% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1792 | 153 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1945 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 550 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 727 | 988 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.974 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.979 | |
| Satd. Flow (prot) | 0 | 3355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4957 | 0 |
| Flt Permitted | | | | | | | | | | | 0.979 | |
| Satd. Flow (perm) | 0 | 3355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4957 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 0.65 | 0.48 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.86 | 0.91 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 846 | 181 | 0 | 0 | 0 | 0 | 0 | 0 | 845 | 1086 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1931 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | | 2 | | | | | | | | 1 | 2 | |
| Detector Template | | Thru | | | | | | | | Left | Thru | |
| Leading Detector (m) | | 10.0 | | | | | | | | 2.0 | 10.0 | |
| Trailing Detector (m) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Position(m) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Size(m) | | 0.6 | | | | | | | | 2.0 | 0.6 | |
| Detector 1 Type | | Cl+Ex | | | | | | | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | | | | | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | | | | | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | | | | | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | | | | 0.0 | |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Detector Phase | | 4 | | | | | | | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | 0.0 | 47.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 53.0 | 53.0 | 0.0 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016

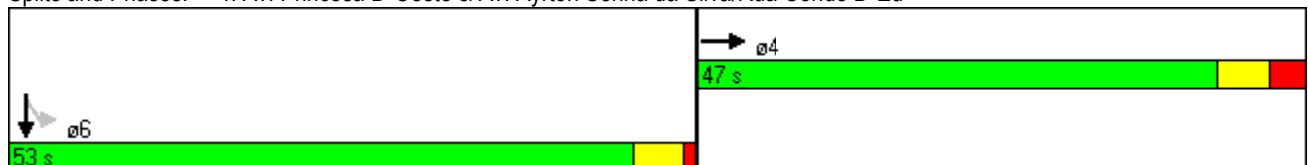


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|------|------|------|------|------|------|------|-------|--------|------|
| Total Split (%) | 0.0% | 47.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 53.0% | 53.0% | 0.0% |
| Maximum Green (s) | | 40.0 | | | | | | | | 48.0 | 48.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 3.0 | 3.0 | |
| Recall Mode | | None | | | | | | | | C-Max | C-Max | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 36.1 | | | | | | | | | 51.9 | |
| Actuated g/C Ratio | | 0.36 | | | | | | | | | 0.52 | |
| v/c Ratio | | 0.85 | | | | | | | | | 0.93dl | |
| Control Delay | | 36.6 | | | | | | | | | 7.2 | |
| Queue Delay | | 0.0 | | | | | | | | | 27.4 | |
| Total Delay | | 36.6 | | | | | | | | | 34.5 | |
| LOS | | D | | | | | | | | | C | |
| Approach Delay | | 36.6 | | | | | | | | | 34.5 | |
| Approach LOS | | D | | | | | | | | | C | |

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 35 (35%), Referenced to phase 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 35.3
 Intersection LOS: D
 Intersection Capacity Utilization 68.3%
 ICU Level of Service C
 Analysis Period (min) 15
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 726 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1715 | 762 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.949 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4842 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4842 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.81 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1805 | 941 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2746 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | | 2 | | | | | | | | | 2 | |
| Detector Template | | Thru | | | | | | | | | Thru | |
| Leading Detector (m) | | 10.0 | | | | | | | | | 10.0 | |
| Trailing Detector (m) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Position(m) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Size(m) | | 0.6 | | | | | | | | | 0.6 | |
| Detector 1 Type | | Cl+Ex | | | | | | | | | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | | | | | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | | | | | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | | | | | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | | | | 0.0 | |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | | 4 | | | | | | | | | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | | | | | | | 4.0 | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 0.0 | 34.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 66.0 | 0.0 |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|------|------|------|------|------|------|------|------|-------|------|
| Total Split (%) | 0.0% | 34.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 66.0% | 0.0% |
| Maximum Green (s) | | 27.0 | | | | | | | | | 61.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | | 3.0 | |
| Recall Mode | | None | | | | | | | | | C-Max | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 26.3 | | | | | | | | | 61.7 | |
| Actuated g/C Ratio | | 0.26 | | | | | | | | | 0.62 | |
| v/c Ratio | | 0.91 | | | | | | | | | 0.92 | |
| Control Delay | | 51.2 | | | | | | | | | 10.5 | |
| Queue Delay | | 0.6 | | | | | | | | | 22.2 | |
| Total Delay | | 51.8 | | | | | | | | | 32.7 | |
| LOS | | D | | | | | | | | | C | |
| Approach Delay | | 51.8 | | | | | | | | | 32.7 | |
| Approach LOS | | D | | | | | | | | | C | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 26 (26%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 80 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.92 |
| Intersection Signal Delay: | 37.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 80.2% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



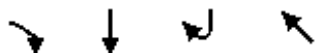
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 179 | 1645 | 4 | 570 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1644 | 5081 | 0 | 3505 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1644 | 5081 | 0 | 3505 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.76 | 0.84 | 0.50 | 0.84 |
| Growth Factor | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 273 | 1958 | 9 | 679 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 273 | 1967 | 0 | 679 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 4.0 | | 4.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 15 | |
| Number of Detectors | 1 | 2 | | 2 |
| Detector Template | Right | Thru | | Thru |
| Leading Detector (m) | 2.0 | 10.0 | | 10.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Size(m) | 2.0 | 0.6 | | 0.6 |
| Detector 1 Type | CI+Ex | CI+Ex | | CI+Ex |
| Detector 1 Channel | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(m) | | 9.4 | | 9.4 |
| Detector 2 Size(m) | | 0.6 | | 0.6 |
| Detector 2 Type | | CI+Ex | | CI+Ex |
| Detector 2 Channel | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Detector Phase | | 6 | | 8 |
| Switch Phase | | | | |
| Minimum Initial (s) | | 4.0 | | 4.0 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|-------------------------|-------|-------|------|-------|
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | 0.0 | 63.0 | 0.0 | 37.0 |
| Total Split (%) | 0.0% | 63.0% | 0.0% | 37.0% |
| Maximum Green (s) | | 58.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Vehicle Extension (s) | | 3.0 | | 3.0 |
| Recall Mode | | C-Max | | None |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 100.0 | 64.9 | | 25.1 |
| Actuated g/C Ratio | 1.00 | 0.65 | | 0.25 |
| v/c Ratio | 0.17 | 0.60 | | 0.77 |
| Control Delay | 0.2 | 11.6 | | 16.2 |
| Queue Delay | 0.3 | 0.4 | | 0.0 |
| Total Delay | 0.5 | 12.0 | | 16.2 |
| LOS | A | B | | B |
| Approach Delay | | 12.0 | | 16.2 |
| Approach LOS | | B | | B |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 35 (35%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.77 |
| Intersection Signal Delay: | 11.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 56.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

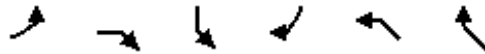
06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|--------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1170 | 0 | 0 | 0 | 0 | 2070 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3367 | 0 | 0 | 0 | 0 | 3538 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3367 | 0 | 0 | 0 | 0 | 3538 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.71 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1648 | 0 | 0 | 0 | 0 | 2226 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1648 | 0 | 0 | 0 | 0 | 2226 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 4.0 | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Number of Detectors | 1 | | | | | 1 |
| Detector Template | Left | | | | | Right |
| Leading Detector (m) | 2.0 | | | | | 2.0 |
| Trailing Detector (m) | 0.0 | | | | | 0.0 |
| Detector 1 Position(m) | 0.0 | | | | | 0.0 |
| Detector 1 Size(m) | 2.0 | | | | | 2.0 |
| Detector 1 Type | Cl+Ex | | | | | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | | | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | | | | | 0.0 |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Detector Phase | 4 | | | | | 2 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | | | | 4.0 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 46.0 | 0.0 | 0.0 | 0.0 | 0.0 | 54.0 |
| Total Split (%) | 46.0% | 0.0% | 0.0% | 0.0% | 0.0% | 54.0% |
| Maximum Green (s) | 40.0 | | | | | 48.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|-------------------------|-------|-----|-----|-----|-----|-------|
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | | | | 3.0 |
| Recall Mode | C-Max | | | | | None |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 40.0 | | | | | 48.0 |
| Actuated g/C Ratio | 0.40 | | | | | 0.48 |
| v/c Ratio | 1.22 | | | | | 1.31 |
| Control Delay | 136.4 | | | | | 162.2 |
| Queue Delay | 9.9 | | | | | 0.0 |
| Total Delay | 146.3 | | | | | 162.2 |
| LOS | F | | | | | F |
| Approach Delay | 146.3 | | | | | |
| Approach LOS | F | | | | | |

Intersection Summary

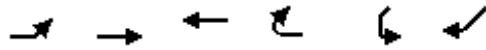
| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.31 |
| Intersection Signal Delay: | 155.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 92.9% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 726 | 637 | 0 | 0 | 0 | 762 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1717 | 1807 | 0 | 0 | 0 | 2814 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1717 | 1807 | 0 | 0 | 0 | 2814 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.88 | 0.65 | 0.92 | 0.92 | 0.92 | 0.81 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 825 | 980 | 0 | 0 | 0 | 941 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 825 | 980 | 0 | 0 | 0 | 941 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 226 | 319 | 7 | 71 | 222 | 29 | 5 | 265 | 236 | 26 | 191 | 373 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | | | 0.981 | | | 0.943 | | | 0.921 | |
| Flt Protected | | 0.977 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1756 | 0 | 0 | 1767 | 0 | 0 | 1798 | 0 | 0 | 1730 | 0 |
| Flt Permitted | | 0.977 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1756 | 0 | 0 | 1767 | 0 | 0 | 1798 | 0 | 0 | 1730 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.72 | 0.95 | 0.58 | 0.72 | 0.82 | 0.54 | 0.42 | 0.74 | 0.88 | 0.75 | 0.88 | 0.91 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 314 | 336 | 14 | 114 | 271 | 62 | 14 | 415 | 311 | 40 | 252 | 410 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 664 | 0 | 0 | 447 | 0 | 0 | 740 | 0 | 0 | 702 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 112.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 537 | 428 | 659 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.922 | |
| Flt Protected | | | | | 0.977 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1634 | 3272 | 0 |
| Flt Permitted | | | | | 0.977 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1634 | 3272 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 132.8 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.89 | 0.72 | 0.87 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 603 | 690 | 757 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 603 | 1447 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 4.0 | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.98 | 0.98 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

05/05/2016



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↖↖ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 317 | 1466 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.993 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3467 | 4847 | 0 | 4879 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3467 | 4847 | 0 | 4879 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 195.7 | | 63.1 |
| Travel Time (s) | | 14.1 | | 4.5 |
| Peak Hour Factor | 0.76 | 0.84 | 0.38 | 0.95 |
| Growth Factor | 100% | 100% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 417 | 1745 | 89 | 1898 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 417 | 1834 | 0 | 1898 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 4.0 | | 4.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.03 | 1.03 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | |
| Number of Detectors | 1 | 2 | | 2 |
| Detector Template | Left | Thru | | Thru |
| Leading Detector (m) | 2.0 | 10.0 | | 10.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Size(m) | 2.0 | 0.6 | | 0.6 |
| Detector 1 Type | CI+Ex | CI+Ex | | CI+Ex |
| Detector 1 Channel | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(m) | | 9.4 | | 9.4 |
| Detector 2 Size(m) | | 0.6 | | 0.6 |
| Detector 2 Type | | CI+Ex | | CI+Ex |
| Detector 2 Channel | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Detector Phase | 8 | 6 | | 4 |
| Switch Phase | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 50.0 | 50.0 | 0.0 | 50.0 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

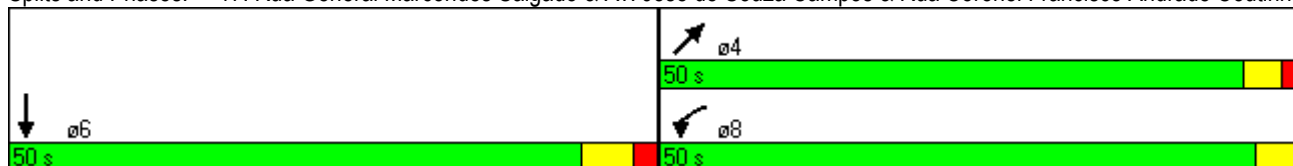


| Lane Group | WBL2 | SBT | SBR2 | NET |
|-------------------------|-------|-------|------|-------|
| Total Split (%) | 50.0% | 50.0% | 0.0% | 50.0% |
| Maximum Green (s) | 46.0 | 44.0 | | 45.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 |
| Recall Mode | C-Max | None | | C-Max |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 46.8 | 43.2 | | 45.8 |
| Actuated g/C Ratio | 0.47 | 0.43 | | 0.46 |
| v/c Ratio | 0.26 | 0.88 | | 0.85 |
| Control Delay | 0.4 | 31.8 | | 23.0 |
| Queue Delay | 0.9 | 0.8 | | 136.1 |
| Total Delay | 1.3 | 32.5 | | 159.0 |
| LOS | A | C | | F |
| Approach Delay | | 32.5 | | 159.0 |
| Approach LOS | | C | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 20 (20%), Referenced to phase 4:NET and 8:WBL, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.88 |
| Intersection Signal Delay: | 87.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 85.4% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

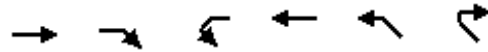
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



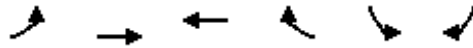
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 822 | 182 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.955 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.92 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Adj. Flow (vph) | 893 | 384 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1277 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | | | | | | |
|-----------------------------------|--------------|--|--|------------------------|--|--|
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 32.8% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
23: Rua Proença

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1787 | 1900 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1787 | 1900 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.63 | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 166 | 273 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 166 | 273 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 575 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2677 | 1787 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2677 | 1787 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.84 | 0.63 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 685 | 166 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 685 | 166 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 4.0 | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↔ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 274 | 1004 | 0 | 0 | 0 | 0 | 0 | 1260 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.971 | | | | |
| Flt Protected | | 0.988 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3497 | 0 | 0 | 0 | 0 | 0 | 4682 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.988 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3497 | 0 | 0 | 0 | 0 | 0 | 4682 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.62 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 | 0.78 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 442 | 1339 | 0 | 0 | 0 | 0 | 0 | 1385 | 336 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1781 | 0 | 0 | 0 | 0 | 0 | 1721 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | | | |
| Detector Template | Left | Thru | | | | | | Thru | | | | |
| Leading Detector (m) | 2.0 | 10.0 | | | | | | 10.0 | | | | |
| Trailing Detector (m) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Position(m) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Size(m) | 2.0 | 0.6 | | | | | | 0.6 | | | | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 2 Position(m) | | 9.4 | | | | | | 9.4 | | | | |
| Detector 2 Size(m) | | 0.6 | | | | | | 0.6 | | | | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | | |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 34.0 | 34.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016

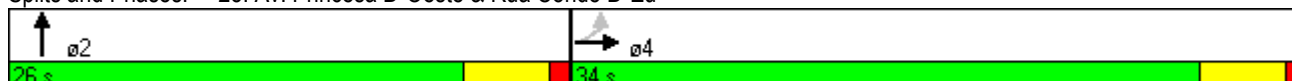


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|------|------|-------|------|------|------|------|
| Total Split (%) | 56.7% | 56.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 43.3% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 29.0 | 29.0 | | | | | | 21.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | | | |
| Recall Mode | None | None | | | | | | Max | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 29.0 | | | | | | 21.0 | | | | |
| Actuated g/C Ratio | | 0.48 | | | | | | 0.35 | | | | |
| v/c Ratio | | 1.05 | | | | | | 1.05 | | | | |
| Control Delay | | 56.0 | | | | | | 58.6 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 56.0 | | | | | | 58.6 | | | | |
| LOS | | E | | | | | | E | | | | |
| Approach Delay | | 56.0 | | | | | | 58.6 | | | | |
| Approach LOS | | E | | | | | | E | | | | |

Intersection Summary

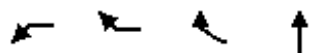
| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 60 |
| Natural Cycle: | 90 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 57.3 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 74.2% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

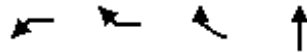


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 624 | 570 | 355 | 2260 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.91 |
| Frt | 0.965 | 0.850 | | |
| Flt Protected | 0.963 | | | |
| Satd. Flow (prot) | 1727 | 1478 | 0 | 5085 |
| Flt Permitted | 0.963 | | | |
| Satd. Flow (perm) | 1727 | 1478 | 0 | 5085 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.88 | 0.84 | 0.91 | 0.92 |
| Growth Factor | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 709 | 679 | 390 | 2457 |
| Shared Lane Traffic (%) | | 32% | | |
| Lane Group Flow (vph) | 926 | 852 | 0 | 2457 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 3.3 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.0 | | | 4.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Number of Detectors | 1 | 1 | | 2 |
| Detector Template | Left | Right | | Thru |
| Leading Detector (m) | 2.0 | 2.0 | | 10.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Size(m) | 2.0 | 2.0 | | 0.6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex |
| Detector 1 Channel | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(m) | | | | 9.4 |
| Detector 2 Size(m) | | | | 0.6 |
| Detector 2 Type | | | | Cl+Ex |
| Detector 2 Channel | | | | |
| Detector 2 Extend (s) | | | | 0.0 |
| Turn Type | NA | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Detector Phase | 8 | 8 | | 2 |
| Switch Phase | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 53.0 | 53.0 | 0.0 | 47.0 |

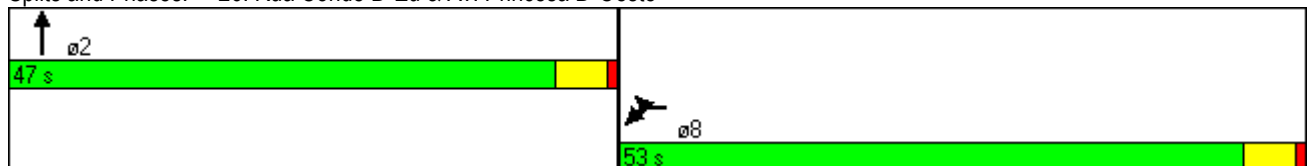


| Lane Group | WBL | WBR | WBR2 | NBT |
|-------------------------|-------|-------|------|-------|
| Total Split (%) | 53.0% | 53.0% | 0.0% | 47.0% |
| Maximum Green (s) | 48.0 | 48.0 | | 42.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 |
| Recall Mode | None | None | | C-Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 48.0 | 48.0 | | 42.0 |
| Actuated g/C Ratio | 0.48 | 0.48 | | 0.42 |
| v/c Ratio | 1.12 | 1.20 | | 1.15 |
| Control Delay | 95.5 | 130.6 | | 98.5 |
| Queue Delay | 301.6 | 326.8 | | 12.0 |
| Total Delay | 397.1 | 457.4 | | 110.5 |
| LOS | F | F | | F |
| Approach Delay | 426.0 | | | 110.5 |
| Approach LOS | F | | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 34 (34%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.20 |
| Intersection Signal Delay: | 242.9 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 104.0% |
| ICU Level of Service | G |
| Analysis Period (min) | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|-----|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1170 | 1790 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3300 | 4888 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3300 | 4888 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.71 | 0.84 | |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 100% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1648 | 2131 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1648 | 2131 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 4.0 | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Number of Detectors | | | | | 1 | 2 | |
| Detector Template | | | | | Left | Thru | |
| Leading Detector (m) | | | | | 2.0 | 10.0 | |
| Trailing Detector (m) | | | | | 0.0 | 0.0 | |
| Detector 1 Position(m) | | | | | 0.0 | 0.0 | |
| Detector 1 Size(m) | | | | | 2.0 | 0.6 | |
| Detector 1 Type | | | | | CI+Ex | CI+Ex | |
| Detector 1 Channel | | | | | | | |
| Detector 1 Extend (s) | | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | | | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | | | | | 9.4 | |
| Detector 2 Size(m) | | | | | | 0.6 | |
| Detector 2 Type | | | | | | CI+Ex | |
| Detector 2 Channel | | | | | | | |
| Detector 2 Extend (s) | | | | | | 0.0 | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Detector Phase | | | | | 6 | 6 | |
| Switch Phase | | | | | | | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|-------------------------|------|------|------|------|-------|-------|------|
| Minimum Initial (s) | | | | | 4.0 | 4.0 | 3.0 |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 52.0 | 52.0 | 8.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 86.7% | 86.7% | 13% |
| Maximum Green (s) | | | | | 46.0 | 46.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | 3.0 |
| Recall Mode | | | | | Max | Max | None |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 67.0 | 67.0 | |
| Actuated g/C Ratio | | | | | 1.00 | 1.00 | |
| v/c Ratio | | | | | 0.50 | 0.44 | |
| Control Delay | | | | | 0.5 | 0.3 | |
| Queue Delay | | | | | 0.0 | 0.0 | |
| Total Delay | | | | | 0.5 | 0.3 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 0.4 | |
| Approach LOS | | | | | | A | |

Intersection Summary

| | |
|------------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 67 |
| Natural Cycle: | 40 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.50 |
| Intersection Signal Delay: | 0.4 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 63.1% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 2109 | 0 | 0 | 1952 | 282 | 715 | 321 | 252 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | 0.980 | | | 0.986 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.957 | | | |
| Satd. Flow (prot) | 0 | 4792 | 0 | 0 | 4793 | 0 | 1787 | 1724 | 1475 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.957 | | | |
| Satd. Flow (perm) | 0 | 4792 | 0 | 0 | 4793 | 0 | 1787 | 1724 | 1475 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.85 | 0.78 | 0.55 | 0.88 | 0.77 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 100% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 3% | 2% | 1% | 4% | 4% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2318 | 0 | 0 | 2664 | 419 | 1300 | 365 | 380 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 2318 | 0 | 0 | 3083 | 0 | 1300 | 403 | 342 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Number of Detectors | | 2 | | | 2 | | 1 | 1 | 1 | | |
| Detector Template | | Thru | | | Thru | | Left | Left | Right | | |
| Leading Detector (m) | | 10.0 | | | 10.0 | | 2.0 | 2.0 | 2.0 | | |
| Trailing Detector (m) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Position(m) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Size(m) | | 0.6 | | | 0.6 | | 2.0 | 2.0 | 2.0 | | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | | |
| Detector 1 Channel | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 2 Position(m) | | 9.4 | | | 9.4 | | | | | | |
| Detector 2 Size(m) | | 0.6 | | | 0.6 | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | |
| Detector 2 Channel | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | |
| Turn Type | | NA | | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Detector Phase | | 4 | | | 8 | | 2 | 2 | 2 | | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | 4.0 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 39.0 | 0.0 | 0.0 | 39.0 | 0.0 | 41.0 | 41.0 | 41.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

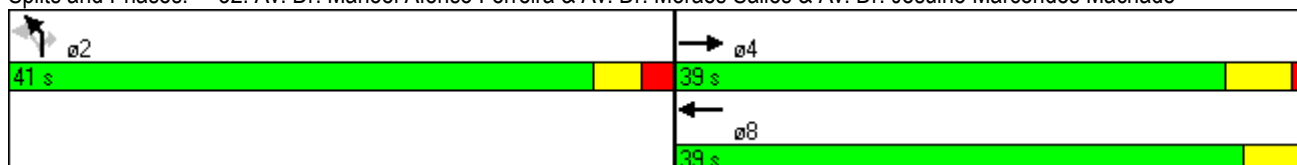


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|-------------------------|------|-------|------|------|-------|------|-------|-------|-------|------|------|
| Total Split (%) | 0.0% | 48.8% | 0.0% | 0.0% | 48.8% | 0.0% | 51.3% | 51.3% | 51.3% | 0.0% | 0.0% |
| Maximum Green (s) | | 34.0 | | | 35.0 | | 36.0 | 36.0 | 36.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | | |
| Recall Mode | | C-Max | | | C-Max | | None | None | None | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 34.0 | | | 35.0 | | 36.0 | 36.0 | 36.0 | | |
| Actuated g/C Ratio | | 0.42 | | | 0.44 | | 0.45 | 0.45 | 0.45 | | |
| v/c Ratio | | 1.14 | | | 1.47 | | 1.62 | 0.52 | 0.52 | | |
| Control Delay | | 93.0 | | | 237.7 | | 304.4 | 16.6 | 16.9 | | |
| Queue Delay | | 284.8 | | | 0.0 | | 7.3 | 152.7 | 140.5 | | |
| Total Delay | | 377.9 | | | 237.7 | | 311.7 | 169.3 | 157.5 | | |
| LOS | | F | | | F | | F | F | F | | |
| Approach Delay | | 377.9 | | | 237.7 | | | 257.9 | | | |
| Approach LOS | | F | | | F | | | F | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 42 (53%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.62 |
| Intersection Signal Delay: | 286.9 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 166.3% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|------|--------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | ↕↕ | |
| Volume (vph) | 560 | 226 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 662 | 54 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.973 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3444 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2703 | 0 |
| Flt Permitted | | 0.973 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3444 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2703 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 85.2 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 6.1 | | |
| Peak Hour Factor | 0.84 | 0.49 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.64 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Adj. Flow (vph) | 667 | 535 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 835 | 98 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 933 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Number of Detectors | 1 | 2 | | | | | | | | 1 | |
| Detector Template | Left | Thru | | | | | | | | Right | |
| Leading Detector (m) | 2.0 | 10.0 | | | | | | | | 2.0 | |
| Trailing Detector (m) | 0.0 | 0.0 | | | | | | | | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | | | | | | | | 0.0 | |
| Detector 1 Size(m) | 2.0 | 0.6 | | | | | | | | 2.0 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | | | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | | | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | | | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | | | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | | | | | | | |
| Detector 2 Size(m) | | 0.6 | | | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | | | | |
| Turn Type | Perm | NA | | | | | | | | custom | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Detector Phase | 4 | 4 | | | | | | | | 2 | |
| Switch Phase | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | | | 4.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 40.0 | 40.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40.0 | 0.0 |
| Total Split (%) | 50.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016

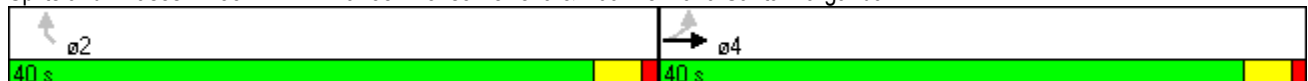


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|-------------------------|-------|-------|-----|-----|-----|-----|-----|-----|-----|------|------|
| Maximum Green (s) | 36.0 | 36.0 | | | | | | | | 36.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| Recall Mode | C-Max | C-Max | | | | | | | | None | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 39.6 | | | | | | | | 32.4 | |
| Actuated g/C Ratio | | 0.50 | | | | | | | | 0.40 | |
| v/c Ratio | | 0.71 | | | | | | | | 0.85 | |
| Control Delay | | 19.4 | | | | | | | | 29.8 | |
| Queue Delay | | 18.5 | | | | | | | | 0.2 | |
| Total Delay | | 37.9 | | | | | | | | 30.1 | |
| LOS | | D | | | | | | | | C | |
| Approach Delay | | 37.9 | | | | | | | | | |
| Approach LOS | | D | | | | | | | | | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 40 (50%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.85 |
| Intersection Signal Delay: | 34.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization: | 66.7% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1003 | 0 | 648 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3503 | 0 | 2731 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3503 | 0 | 2731 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 216.8 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.6 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.87 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1153 | 0 | 704 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1153 | 0 | 704 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

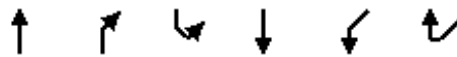
Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.1% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

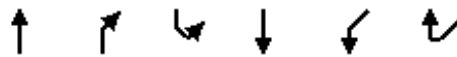


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|-------|-------|------|------|------|-------|-----|
| Lane Configurations | ↑↑↑↑ | | | | | | |
| Volume (vph) | 2115 | 1126 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.936 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4672 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4672 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.83 | 0.60 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2548 | 1877 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4425 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 0.95 | 0.95 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Number of Detectors | 2 | | | | | | |
| Detector Template | Thru | | | | | | |
| Leading Detector (m) | 10.0 | | | | | | |
| Trailing Detector (m) | 0.0 | | | | | | |
| Detector 1 Position(m) | 0.0 | | | | | | |
| Detector 1 Size(m) | 0.6 | | | | | | |
| Detector 1 Type | CI+Ex | | | | | | |
| Detector 1 Channel | | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | | | | |
| Detector 1 Queue (s) | 0.0 | | | | | | |
| Detector 1 Delay (s) | 0.0 | | | | | | |
| Detector 2 Position(m) | 9.4 | | | | | | |
| Detector 2 Size(m) | 0.6 | | | | | | |
| Detector 2 Type | CI+Ex | | | | | | |
| Detector 2 Channel | | | | | | | |
| Detector 2 Extend (s) | 0.0 | | | | | | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Detector Phase | 2 | | | | | | |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 4.0 | | | | | | 2.0 |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

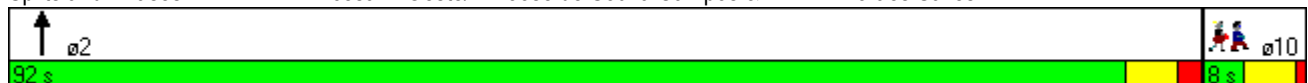


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|-------------------------|--------|------|------|------|------|------|------|
| Total Split (s) | 92.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Total Split (%) | 92.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8% |
| Maximum Green (s) | 86.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | 3.0 | | | | | | 3.0 |
| Recall Mode | C-Max | | | | | | None |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 100.0 | | | | | | |
| Actuated g/C Ratio | 1.00 | | | | | | |
| v/c Ratio | 1.20dr | | | | | | |
| Control Delay | 3.4 | | | | | | |
| Queue Delay | 85.0 | | | | | | |
| Total Delay | 88.4 | | | | | | |
| LOS | F | | | | | | |
| Approach Delay | 88.4 | | | | | | |
| Approach LOS | F | | | | | | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 56 (56%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.95 |
| Intersection Signal Delay: | 88.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 71.1% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 317 | 123 | 0 | 2115 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.990 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3337 | 1419 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3337 | 1419 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.65 | 0.92 | 0.83 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 417 | 220 | 0 | 2548 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 13% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 446 | 191 | 0 | 2548 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.02 | 1.02 | 1.02 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | | | | | 2 | 1 | 1 | 2 | | | | |
| Detector Template | | | | | Thru | Right | Left | Thru | | | | |
| Leading Detector (m) | | | | | 10.0 | 2.0 | 2.0 | 10.0 | | | | |
| Trailing Detector (m) | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Detector 1 Position(m) | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Detector 1 Size(m) | | | | | 0.6 | 2.0 | 2.0 | 0.6 | | | | |
| Detector 1 Type | | | | | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Detector 1 Queue (s) | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Detector 1 Delay (s) | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Detector 2 Position(m) | | | | | 9.4 | | | 9.4 | | | | |
| Detector 2 Size(m) | | | | | 0.6 | | | 0.6 | | | | |
| Detector 2 Type | | | | | Cl+Ex | | | Cl+Ex | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | | | | 0.0 | | | 0.0 | | | | |
| Turn Type | | | | | NA | Perm | Perm | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Detector Phase | | | | | 8 | 8 | 2 | 2 | | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | | | | 4.0 | 4.0 | 4.0 | 4.0 | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 28.0 | 28.0 | 72.0 | 72.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

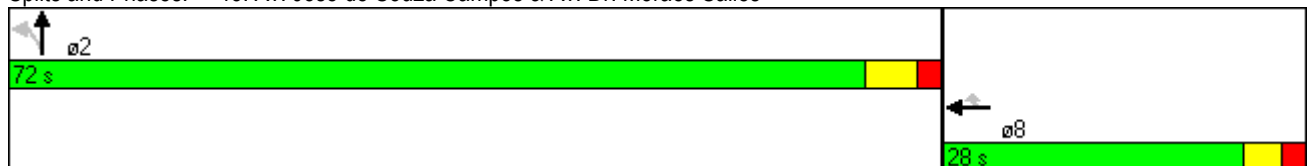


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 28.0% | 28.0% | 72.0% | 72.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | | | | 23.0 | 23.0 | 66.0 | 66.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | | |
| Recall Mode | | | | | None | None | C-Max | C-Max | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 18.9 | 18.9 | | 70.1 | | | | |
| Actuated g/C Ratio | | | | | 0.19 | 0.19 | | 0.70 | | | | |
| v/c Ratio | | | | | 0.71 | 0.71 | | 0.72 | | | | |
| Control Delay | | | | | 44.1 | 52.6 | | 9.6 | | | | |
| Queue Delay | | | | | 30.0 | 672.7 | | 88.7 | | | | |
| Total Delay | | | | | 74.1 | 725.3 | | 98.3 | | | | |
| LOS | | | | | E | F | | F | | | | |
| Approach Delay | | | | | 269.4 | | | 98.3 | | | | |
| Approach LOS | | | | | F | | | F | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 69 (69%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 132.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 71.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 1016 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.940 | |
| Flt Protected | 0.950 | 0.997 | 0.950 | | |
| Satd. Flow (prot) | 1595 | 3347 | 1715 | 4568 | 0 |
| Flt Permitted | 0.950 | 0.997 | 0.950 | | |
| Satd. Flow (perm) | 1595 | 3347 | 1715 | 4568 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 219.6 | |
| Travel Time (s) | | 2.4 | | 15.8 | |
| Peak Hour Factor | 0.79 | 0.91 | 0.66 | 0.95 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 263 | 492 | 1216 | 1679 | 1104 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 237 | 518 | 1216 | 2783 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Number of Detectors | 1 | 2 | 1 | 2 | |
| Detector Template | Left | Thru | Left | Thru | |
| Leading Detector (m) | 2.0 | 10.0 | 2.0 | 10.0 | |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Size(m) | 2.0 | 0.6 | 2.0 | 0.6 | |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | |
| Detector 1 Channel | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | 0.6 | |
| Detector 2 Type | | CI+Ex | | CI+Ex | |
| Detector 2 Channel | | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 | |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Detector Phase | 4 | 4 | 2 | 2 | |
| Switch Phase | | | | | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|-------------------------|-------|-------|-------|--------|------|
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 21.0 | 21.0 | 79.0 | 79.0 | 0.0 |
| Total Split (%) | 21.0% | 21.0% | 79.0% | 79.0% | 0.0% |
| Maximum Green (s) | 17.0 | 17.0 | 75.0 | 75.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | C-Max | C-Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 17.0 | 17.0 | 75.0 | 75.0 | |
| Actuated g/C Ratio | 0.17 | 0.17 | 0.75 | 0.75 | |
| v/c Ratio | 0.88 | 0.91 | 0.94 | 0.98dr | |
| Control Delay | 72.5 | 63.1 | 27.4 | 10.5 | |
| Queue Delay | 198.9 | 60.8 | 0.0 | 42.3 | |
| Total Delay | 271.4 | 123.9 | 27.4 | 52.8 | |
| LOS | F | F | C | D | |
| Approach Delay | | 170.2 | | 45.1 | |
| Approach LOS | | F | | D | |

Intersection Summary

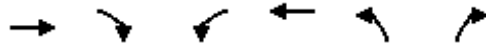
| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 0 (0%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.94 |
| Intersection Signal Delay: | 65.0 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 72.6% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |
| dr Defacto Right Lane. Recode with 1 though lane as a right lane. | |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 06/05/2016



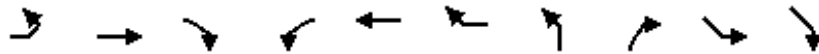
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↓ | | | | | |
| Volume (vph) | 1425 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.994 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 5012 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 5012 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.53 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1638 | 72 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1710 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coimbra



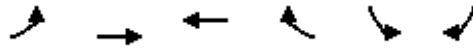
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↗ | ↘ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | | 0.850 | | | | |
| Fl _t Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1807 | 1464 | 3502 | 0 | 0 | 0 |
| Fl _t Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1807 | 1464 | 3502 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.25 | 0.38 | 0.95 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 9 | 82 | 845 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 9 | 82 | 845 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↓ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 5036 | 0 | 0 | 1770 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 5036 | 0 | 0 | 1770 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.25 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 718 | 0 | 0 | 9 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 718 | 0 | 0 | 9 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|--------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1425 | 0 | 0 | 1535 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.947 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3575 | 0 | 0 | 4692 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3575 | 0 | 0 | 4692 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.87 | 0.92 | 0.92 | 0.84 | 0.25 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1638 | 0 | 0 | 1827 | 993 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1638 | 0 | 0 | 2820 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Number of Detectors | | 1 | | | 1 | | | |
| Detector Template | | Right | | | | | | |
| Leading Detector (m) | | 2.0 | | | 2.0 | | | |
| Trailing Detector (m) | | 0.0 | | | 0.0 | | | |
| Detector 1 Position(m) | | 0.0 | | | 0.0 | | | |
| Detector 1 Size(m) | | 2.0 | | | 2.0 | | | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | |
| Detector 1 Channel | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | |
| Turn Type | | custom | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Detector Phase | | 4 | | | 6 | | | |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | 4.0 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | 0.0 | 44.0 | 0.0 | 0.0 | 56.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 44.0% | 0.0% | 0.0% | 56.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 40.0 | | | 52.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016

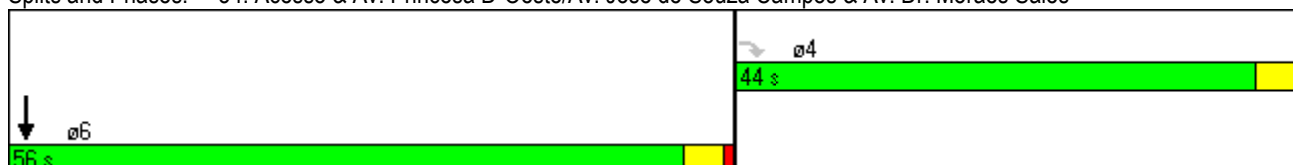


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|-------------------------|-----|-------|-----|-----|--------|-----|-----|-----|
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | |
| Recall Mode | | None | | | C-Max | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 40.0 | | | 52.0 | | | |
| Actuated g/C Ratio | | 0.40 | | | 0.52 | | | |
| v/c Ratio | | 1.15 | | | 1.18dr | | | |
| Control Delay | | 100.9 | | | 89.2 | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | |
| Total Delay | | 100.9 | | | 89.2 | | | |
| LOS | | F | | | F | | | |
| Approach Delay | | | | | 89.2 | | | |
| Approach LOS | | | | | F | | | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 66 (66%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.16 |
| Intersection Signal Delay: | 93.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 75.1% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

06/05/2016

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↖ | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.53 | 0.25 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 72 | 993 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 72 | 993 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 23.8% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1522 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4825 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4825 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 188.6 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.6 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.67 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 59 | 1673 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1732 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 1075 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 116.7 | | | 22.0 |
| Travel Time (s) | 2.4 | | 8.4 | | | 1.6 |
| Peak Hour Factor | 0.67 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 59 | 0 | 0 | 0 | 0 | 1181 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 59 | 0 | 0 | 0 | 0 | 1181 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.0 | | 4.0 | | | 4.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.6% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↗ | | | ↑↑↑ | | |
| Volume (vph) | 726 | 0 | 0 | 1534 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.88 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 100% | 116% | 116% |
| Adj. Flow (vph) | 825 | 0 | 0 | 1686 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 825 | 0 | 0 | 1686 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Number of Detectors | 1 | | | 2 | | |
| Detector Template | Left | | | Thru | | |
| Leading Detector (m) | 2.0 | | | 10.0 | | |
| Trailing Detector (m) | 0.0 | | | 0.0 | | |
| Detector 1 Position(m) | 0.0 | | | 0.0 | | |
| Detector 1 Size(m) | 2.0 | | | 0.6 | | |
| Detector 1 Type | CI+Ex | | | CI+Ex | | |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | 0.0 | | |
| Detector 1 Queue (s) | 0.0 | | | 0.0 | | |
| Detector 1 Delay (s) | 0.0 | | | 0.0 | | |
| Detector 2 Position(m) | | | | 9.4 | | |
| Detector 2 Size(m) | | | | 0.6 | | |
| Detector 2 Type | | | | CI+Ex | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | | |
| Turn Type | NA | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Detector Phase | 4 | | | 2 | | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | | 4.0 | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 45.0 | 0.0 | 0.0 | 55.0 | 0.0 | 0.0 |
| Total Split (%) | 45.0% | 0.0% | 0.0% | 55.0% | 0.0% | 0.0% |
| Maximum Green (s) | 38.0 | | | 50.0 | | |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|------|-----|-----|-------|-----|-----|
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | | |
| Recall Mode | None | | | C-Max | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 29.9 | | | 58.1 | | |
| Actuated g/C Ratio | 0.30 | | | 0.58 | | |
| v/c Ratio | 0.80 | | | 0.57 | | |
| Control Delay | 8.3 | | | 14.8 | | |
| Queue Delay | 14.0 | | | 70.7 | | |
| Total Delay | 22.3 | | | 85.5 | | |
| LOS | C | | | F | | |
| Approach Delay | 22.3 | | | 85.5 | | |
| Approach LOS | C | | | F | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 32 (32%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.80 |
| Intersection Signal Delay: | 64.7 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 132.4% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

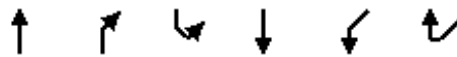
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016

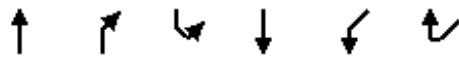


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↓ | |
| Volume (vph) | 0 | 0 | 0 | 1852 | 624 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5085 | 1770 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5085 | 1770 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.84 | 0.88 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 100% | 100% | 116% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2205 | 709 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2205 | 709 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Number of Detectors | | | | 2 | 1 | |
| Detector Template | | | | Thru | Left | |
| Leading Detector (m) | | | | 10.0 | 2.0 | |
| Trailing Detector (m) | | | | 0.0 | 0.0 | |
| Detector 1 Position(m) | | | | 0.0 | 0.0 | |
| Detector 1 Size(m) | | | | 0.6 | 2.0 | |
| Detector 1 Type | | | | CI+Ex | CI+Ex | |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | | | 9.4 | | |
| Detector 2 Size(m) | | | | 0.6 | | |
| Detector 2 Type | | | | CI+Ex | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | | |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Detector Phase | | | | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 52.0 | 48.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 52.0% | 48.0% | 0.0% |
| Maximum Green (s) | | | | 47.0 | 44.0 | |

Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016

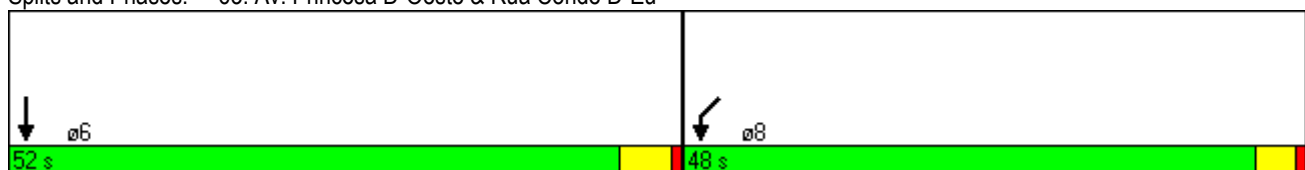


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|-------------------------|-----|-----|-----|-------|------|-----|
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | |
| Recall Mode | | | | C-Max | None | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 48.6 | 42.4 | |
| Actuated g/C Ratio | | | | 0.49 | 0.42 | |
| v/c Ratio | | | | 0.89 | 0.94 | |
| Control Delay | | | | 19.8 | 10.1 | |
| Queue Delay | | | | 0.2 | 87.2 | |
| Total Delay | | | | 19.9 | 97.3 | |
| LOS | | | | B | F | |
| Approach Delay | | | | 19.9 | 97.3 | |
| Approach LOS | | | | B | F | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 33 (33%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 80 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.94 |
| Intersection Signal Delay: | 38.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 77.9% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

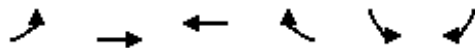
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & R. Antônio A. de Camargo

06/05/2016

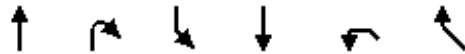


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 447 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.995 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3504 | 0 | 0 | 1644 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3504 | 0 | 0 | 1644 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.79 | 0.25 | 0.92 | 0.25 |
| Growth Factor | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 566 | 19 | 0 | 51 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 585 | 0 | 0 | 51 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.02 | 1.02 | 1.02 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 22.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|--------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 2257 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3574 | 0 | 0 | 0 | 0 | 3573 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3574 | 0 | 0 | 0 | 0 | 3573 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 1.00 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1898 | 0 | 0 | 0 | 0 | 2257 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1898 | 0 | 0 | 0 | 0 | 2257 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Number of Detectors | 2 | | | | | 1 |
| Detector Template | Thru | | | | | Right |
| Leading Detector (m) | 10.0 | | | | | 2.0 |
| Trailing Detector (m) | 0.0 | | | | | 0.0 |
| Detector 1 Position(m) | 0.0 | | | | | 0.0 |
| Detector 1 Size(m) | 0.6 | | | | | 2.0 |
| Detector 1 Type | CI+Ex | | | | | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | | | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | | | | | 0.0 |
| Detector 2 Position(m) | 9.4 | | | | | |
| Detector 2 Size(m) | 0.6 | | | | | |
| Detector 2 Type | CI+Ex | | | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | 0.0 | | | | | |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Detector Phase | 4 | | | | | 2 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | | | | 4.0 |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 46.0 | 0.0 | 0.0 | 0.0 | 0.0 | 54.0 |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|-------------------------|-------|------|------|------|------|-------|
| Total Split (%) | 46.0% | 0.0% | 0.0% | 0.0% | 0.0% | 54.0% |
| Maximum Green (s) | 42.0 | | | | | 48.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | | | | 3.0 |
| Recall Mode | C-Max | | | | | None |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 42.0 | | | | | 48.0 |
| Actuated g/C Ratio | 0.42 | | | | | 0.48 |
| v/c Ratio | 1.26 | | | | | 1.32 |
| Control Delay | 134.8 | | | | | 167.3 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 134.8 | | | | | 167.3 |
| LOS | F | | | | | F |
| Approach Delay | 134.8 | | | | | |
| Approach LOS | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 26 (26%), Referenced to phase 4:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.32 |
| Intersection Signal Delay: | 152.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 110.8% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Maciel

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1992 | 375 | 0 | 2979 | 0 | 101 | 720 | 143 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3184 | 1398 | 0 | 4885 | 0 | 0 | 3398 | 1537 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3184 | 1398 | 0 | 4885 | 0 | 0 | 3398 | 1537 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 144.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.72 | 0.92 | 0.85 | 0.92 | 0.81 | 0.77 | 0.87 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 3% | 2% | 1% | 1% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2189 | 604 | 0 | 3505 | 0 | 145 | 935 | 191 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2249 | 544 | 0 | 3505 | 0 | 0 | 1080 | 191 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Number of Detectors | | 2 | 1 | | 2 | | 1 | 1 | 1 | | |
| Detector Template | | Thru | Right | | Thru | | Left | Left | Right | | |
| Leading Detector (m) | | 10.0 | 2.0 | | 10.0 | | 2.0 | 2.0 | 2.0 | | |
| Trailing Detector (m) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Position(m) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Size(m) | | 0.6 | 2.0 | | 0.6 | | 2.0 | 2.0 | 2.0 | | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | | |
| Detector 1 Channel | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 2 Position(m) | | 9.4 | | | 9.4 | | | | | | |
| Detector 2 Size(m) | | 0.6 | | | 0.6 | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | |
| Detector 2 Channel | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | |
| Turn Type | | NA | Perm | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Detector Phase | | 4 | 4 | | 8 | | 6 | 6 | 6 | | |
| Switch Phase | | | | | | | | | | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------|------|-------|-------|------|-------|------|-------|-------|-------|------|------|
| Minimum Initial (s) | | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | 4.0 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 39.0 | 39.0 | 0.0 | 39.0 | 0.0 | 21.0 | 21.0 | 21.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 65.0% | 65.0% | 0.0% | 65.0% | 0.0% | 35.0% | 35.0% | 35.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 35.0 | 35.0 | | 34.0 | | 16.0 | 16.0 | 16.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |

Lead/Lag

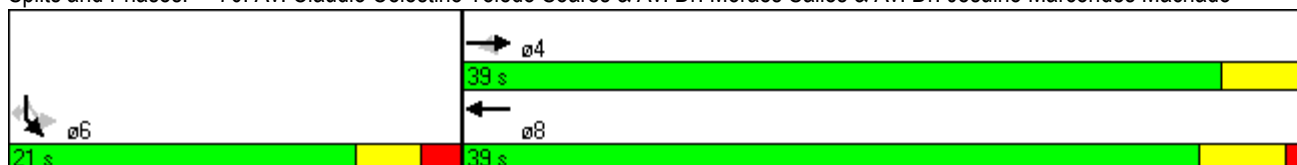
Lead-Lag Optimize?

| | | | | | | | | | | | |
|-------------------------|--|-------|------|--|-------|--|------|-------|------|--|--|
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | | |
| Recall Mode | | Max | Max | | Max | | None | None | None | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 35.0 | 35.0 | | 34.0 | | | 16.0 | 16.0 | | |
| Actuated g/C Ratio | | 0.58 | 0.58 | | 0.57 | | | 0.27 | 0.27 | | |
| v/c Ratio | | 1.21 | 0.67 | | 1.27 | | | 1.19 | 0.47 | | |
| Control Delay | | 117.6 | 13.6 | | 140.9 | | | 121.7 | 22.9 | | |
| Queue Delay | | 0.0 | 0.0 | | 124.5 | | | 0.0 | 0.0 | | |
| Total Delay | | 117.6 | 13.6 | | 265.3 | | | 121.7 | 22.9 | | |
| LOS | | F | B | | F | | | F | C | | |
| Approach Delay | | 97.3 | | | 265.3 | | | 106.8 | | | |
| Approach LOS | | F | | | F | | | F | | | |

Intersection Summary

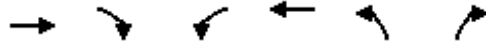
| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 60 |
| Natural Cycle: | 130 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 1.27 |
| Intersection Signal Delay: | 176.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 166.3% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings
71: Av. Guarani & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Volume (vph) | 1934 | 155 | 0 | 3145 | 0 | 531 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.0 | 4.0 |
| Grade (%) | 14% | | | 0% | 14% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.985 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4509 | 0 | 0 | 5036 | 0 | 1558 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4509 | 0 | 0 | 5036 | 0 | 1558 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 61.5 | | | 53.0 | 86.4 | |
| Travel Time (s) | 4.4 | | | 3.8 | 6.2 | |
| Peak Hour Factor | 0.96 | 0.68 | 0.92 | 0.85 | 0.92 | 0.90 |
| Growth Factor | 100% | 100% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 6% | 0% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 2015 | 228 | 0 | 3700 | 0 | 590 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 2243 | 0 | 0 | 3700 | 0 | 590 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | R NA |
| Median Width(m) | 4.8 | | | 4.8 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.0 | | | 4.0 | 4.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.10 | 1.10 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 80.4% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 740 | 1266 | 2006 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.37 |
| Stops (#) | 740 | 0 | 740 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 3 | 3 | 5 |
| Distance Traveled (km) | 137 | 138 | 275 |
| Fuel Consumed (l) | 30 | 13 | 43 |
| Fuel Economy (km/l) | 4.6 | 10.5 | 6.4 |
| CO Emissions (kg) | 0.55 | 0.24 | 0.80 |
| NOx Emissions (kg) | 0.11 | 0.05 | 0.15 |
| VOC Emissions (kg) | 0.13 | 0.06 | 0.18 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 1106 | 747 | 191 | 398 | 2442 |
| Control Delay / Veh (s/v) | 77 | 86 | 50 | 105 | 82 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 77 | 86 | 50 | 105 | 82 |
| Total Delay (hr) | 24 | 18 | 3 | 12 | 56 |
| Stops / Veh | 0.89 | 0.90 | 0.85 | 0.87 | 0.89 |
| Stops (#) | 988 | 669 | 162 | 348 | 2167 |
| Average Speed (km/hr) | 7 | 12 | 6 | 3 | 8 |
| Total Travel Time (hr) | 28 | 23 | 3 | 12 | 67 |
| Distance Traveled (km) | 205 | 275 | 16 | 39 | 536 |
| Fuel Consumed (l) | 107 | 91 | 13 | 44 | 254 |
| Fuel Economy (km/l) | 1.9 | 3.0 | 1.3 | 0.9 | 2.1 |
| CO Emissions (kg) | 2.00 | 1.69 | 0.23 | 0.81 | 4.73 |
| NOx Emissions (kg) | 0.39 | 0.33 | 0.05 | 0.16 | 0.91 |
| VOC Emissions (kg) | 0.46 | 0.39 | 0.05 | 0.19 | 1.09 |
| Unserviced Vehicles (#) | 34 | 19 | 0 | 22 | 76 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

3: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 1789 | 1789 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 10 | 10 |
| Distance Traveled (km) | 498 | 498 |
| Fuel Consumed (l) | 47 | 47 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.88 | 0.88 |
| NOx Emissions (kg) | 0.17 | 0.17 |
| VOC Emissions (kg) | 0.20 | 0.20 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 637 | 1715 | 2352 |
| Control Delay / Veh (s/v) | 37 | 7 | 15 |
| Queue Delay / Veh (s/v) | 0 | 27 | 20 |
| Total Delay / Veh (s/v) | 37 | 35 | 35 |
| Total Delay (hr) | 6 | 16 | 23 |
| Stops / Veh | 0.88 | 0.35 | 0.50 |
| Stops (#) | 563 | 605 | 1168 |
| Average Speed (km/hr) | 4 | 4 | 4 |
| Total Travel Time (hr) | 7 | 18 | 25 |
| Distance Traveled (km) | 30 | 78 | 107 |
| Fuel Consumed (l) | 33 | 67 | 100 |
| Fuel Economy (km/l) | 0.9 | 1.2 | 1.1 |
| CO Emissions (kg) | 0.62 | 1.24 | 1.86 |
| NOx Emissions (kg) | 0.12 | 0.24 | 0.36 |
| VOC Emissions (kg) | 0.14 | 0.29 | 0.43 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 726 | 2477 | 3203 |
| Control Delay / Veh (s/v) | 51 | 10 | 20 |
| Queue Delay / Veh (s/v) | 1 | 22 | 17 |
| Total Delay / Veh (s/v) | 52 | 33 | 37 |
| Total Delay (hr) | 10 | 22 | 33 |
| Stops / Veh | 0.91 | 0.76 | 0.79 |
| Stops (#) | 660 | 1884 | 2544 |
| Average Speed (km/hr) | 4 | 7 | 6 |
| Total Travel Time (hr) | 11 | 26 | 37 |
| Distance Traveled (km) | 42 | 169 | 212 |
| Fuel Consumed (l) | 48 | 121 | 168 |
| Fuel Economy (km/l) | 0.9 | 1.4 | 1.3 |
| CO Emissions (kg) | 0.89 | 2.24 | 3.13 |
| NOx Emissions (kg) | 0.17 | 0.43 | 0.60 |
| VOC Emissions (kg) | 0.20 | 0.52 | 0.72 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

| Direction | EB | SB | NW | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 207 | 1649 | 570 | 2426 |
| Control Delay / Veh (s/v) | 0 | 12 | 16 | 12 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 12 | 16 | 12 |
| Total Delay (hr) | 0 | 5 | 3 | 8 |
| Stops / Veh | 0.00 | 0.55 | 0.76 | 0.55 |
| Stops (#) | 0 | 900 | 431 | 1331 |
| Average Speed (km/hr) | 42 | 23 | 6 | 19 |
| Total Travel Time (hr) | 0 | 10 | 3 | 13 |
| Distance Traveled (km) | 8 | 224 | 18 | 250 |
| Fuel Consumed (l) | 1 | 57 | 18 | 76 |
| Fuel Economy (km/l) | NA | 4.0 | 1.0 | 3.3 |
| CO Emissions (kg) | 0.01 | 1.05 | 0.34 | 1.41 |
| NOx Emissions (kg) | 0.00 | 0.20 | 0.07 | 0.27 |
| VOC Emissions (kg) | 0.00 | 0.24 | 0.08 | 0.33 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

7: Av. Princesa D'Oeste

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1170 | 2070 | 3240 |
| Control Delay / Veh (s/v) | 136 | 162 | 153 |
| Queue Delay / Veh (s/v) | 10 | 0 | 4 |
| Total Delay / Veh (s/v) | 146 | 162 | 156 |
| Total Delay (hr) | 48 | 93 | 141 |
| Stops / Veh | 0.83 | 0.57 | 0.66 |
| Stops (#) | 967 | 1171 | 2138 |
| Average Speed (km/hr) | 1 | 8 | 6 |
| Total Travel Time (hr) | 48 | 112 | 160 |
| Distance Traveled (km) | 28 | 927 | 955 |
| Fuel Consumed (l) | 156 | 373 | 529 |
| Fuel Economy (km/l) | 0.2 | 2.5 | 1.8 |
| CO Emissions (kg) | 2.90 | 6.93 | 9.83 |
| NOx Emissions (kg) | 0.56 | 1.34 | 1.90 |
| VOC Emissions (kg) | 0.67 | 1.60 | 2.27 |
| Unserviced Vehicles (#) | 214 | 491 | 705 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

8: Av. Ayrton Senna da Silva

| Direction | EB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1363 | 762 | 2125 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 124 | 44 | 169 |
| Fuel Consumed (l) | 12 | 4 | 16 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.22 | 0.08 | 0.30 |
| NOx Emissions (kg) | 0.04 | 0.02 | 0.06 |
| VOC Emissions (kg) | 0.05 | 0.02 | 0.07 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 553 | 338 | 587 | 625 | 2103 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Stops (#) | 553 | 338 | 587 | 625 | 2103 |
| Average Speed (km/hr) | 50 | 50 | 50 | 50 | 50 |
| Total Travel Time (hr) | 4 | 1 | 1 | 1 | 8 |
| Distance Traveled (km) | 203 | 41 | 71 | 67 | 383 |
| Fuel Consumed (l) | 32 | 12 | 20 | 20 | 84 |
| Fuel Economy (km/l) | 6.4 | 3.6 | 3.6 | 3.3 | 4.6 |
| CO Emissions (kg) | 0.59 | 0.21 | 0.37 | 0.38 | 1.55 |
| NOx Emissions (kg) | 0.11 | 0.04 | 0.07 | 0.07 | 0.30 |
| VOC Emissions (kg) | 0.14 | 0.05 | 0.09 | 0.09 | 0.36 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

| Direction | NB | SE | All |
|------------------------------|------|------|------|
| Volume (vph) | 537 | 1155 | 1692 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.32 |
| Stops (#) | 537 | 0 | 537 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 | 2 |
| Distance Traveled (km) | 71 | 47 | 118 |
| Fuel Consumed (l) | 19 | 4 | 23 |
| Fuel Economy (km/l) | 3.8 | 10.5 | 5.1 |
| CO Emissions (kg) | 0.35 | 0.08 | 0.43 |
| NOx Emissions (kg) | 0.07 | 0.02 | 0.08 |
| VOC Emissions (kg) | 0.08 | 0.02 | 0.10 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Direction | WB | SB | NE | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 317 | 1500 | 1803 | 3620 |
| Control Delay / Veh (s/v) | 0 | 32 | 23 | 25 |
| Queue Delay / Veh (s/v) | 1 | 1 | 136 | 68 |
| Total Delay / Veh (s/v) | 1 | 33 | 159 | 93 |
| Total Delay (hr) | 0 | 14 | 80 | 93 |
| Stops / Veh | 0.00 | 0.87 | 0.88 | 0.80 |
| Stops (#) | 0 | 1311 | 1578 | 2889 |
| Average Speed (km/hr) | 32 | 15 | 1 | 4 |
| Total Travel Time (hr) | 0 | 19 | 82 | 102 |
| Distance Traveled (km) | 10 | 294 | 114 | 418 |
| Fuel Consumed (l) | 1 | 95 | 267 | 363 |
| Fuel Economy (km/l) | 8.0 | 3.1 | 0.4 | 1.2 |
| CO Emissions (kg) | 0.02 | 1.76 | 4.96 | 6.75 |
| NOx Emissions (kg) | 0.00 | 0.34 | 0.96 | 1.30 |
| VOC Emissions (kg) | 0.01 | 0.41 | 1.14 | 1.56 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1033 | 1033 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 51 | 51 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 34 | 34 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.06 | 0.06 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

23: Rua Proença

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 312 | 312 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 30 | 30 |
| Fuel Consumed (l) | 3 | 3 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.05 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

24: Rua Barão de Paranapanema

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 575 | 105 | 680 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 19 | 3 | 22 |
| Fuel Consumed (l) | 2 | 0 | 2 |
| Fuel Economy (km/l) | 10.5 | NA | 10.5 |
| CO Emissions (kg) | 0.03 | 0.00 | 0.04 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

25: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1278 | 1522 | 2800 |
| Control Delay / Veh (s/v) | 56 | 59 | 57 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 56 | 59 | 57 |
| Total Delay (hr) | 20 | 25 | 45 |
| Stops / Veh | 0.82 | 0.85 | 0.83 |
| Stops (#) | 1047 | 1289 | 2336 |
| Average Speed (km/hr) | 2 | 2 | 2 |
| Total Travel Time (hr) | 21 | 26 | 46 |
| Distance Traveled (km) | 41 | 42 | 82 |
| Fuel Consumed (l) | 82 | 101 | 184 |
| Fuel Economy (km/l) | 0.5 | 0.4 | 0.4 |
| CO Emissions (kg) | 1.53 | 1.89 | 3.42 |
| NOx Emissions (kg) | 0.30 | 0.36 | 0.66 |
| VOC Emissions (kg) | 0.35 | 0.44 | 0.79 |
| Unserviced Vehicles (#) | 65 | 73 | 138 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

26: Rua Conde D'Eu & Av. Princesa D'Oeste

| Direction | WB | NB | All |
|------------------------------|-------|------|-------|
| Volume (vph) | 1549 | 2260 | 3809 |
| Control Delay / Veh (s/v) | 112 | 99 | 104 |
| Queue Delay / Veh (s/v) | 314 | 12 | 135 |
| Total Delay / Veh (s/v) | 426 | 110 | 239 |
| Total Delay (hr) | 183 | 69 | 253 |
| Stops / Veh | 0.82 | 0.87 | 0.85 |
| Stops (#) | 1266 | 1971 | 3237 |
| Average Speed (km/hr) | 1 | 2 | 1 |
| Total Travel Time (hr) | 187 | 72 | 259 |
| Distance Traveled (km) | 167 | 155 | 322 |
| Fuel Consumed (l) | 552 | 251 | 803 |
| Fuel Economy (km/l) | 0.3 | 0.6 | 0.4 |
| CO Emissions (kg) | 10.27 | 4.67 | 14.94 |
| NOx Emissions (kg) | 1.98 | 0.90 | 2.88 |
| VOC Emissions (kg) | 2.37 | 1.08 | 3.45 |
| Unserviced Vehicles (#) | 209 | 295 | 504 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

28: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 2960 | 2960 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 1 | 1 |
| Average Speed (km/hr) | 47 | 47 |
| Total Travel Time (hr) | 5 | 5 |
| Distance Traveled (km) | 243 | 243 |
| Fuel Consumed (l) | 24 | 24 |
| Fuel Economy (km/l) | 10.1 | 10.1 |
| CO Emissions (kg) | 0.45 | 0.45 |
| NOx Emissions (kg) | 0.09 | 0.09 |
| VOC Emissions (kg) | 0.10 | 0.10 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | NB | All |
|------------------------------|-------|-------|------|-------|
| Volume (vph) | 2109 | 2591 | 1328 | 6028 |
| Control Delay / Veh (s/v) | 93 | 238 | 172 | 173 |
| Queue Delay / Veh (s/v) | 285 | 0 | 72 | 116 |
| Total Delay / Veh (s/v) | 378 | 238 | 244 | 288 |
| Total Delay (hr) | 221 | 171 | 90 | 482 |
| Stops / Veh | 0.85 | 0.76 | 0.69 | 0.77 |
| Stops (#) | 1783 | 1972 | 913 | 4668 |
| Average Speed (km/hr) | 1 | 3 | 1 | 1 |
| Total Travel Time (hr) | 224 | 181 | 91 | 496 |
| Distance Traveled (km) | 124 | 512 | 50 | 685 |
| Fuel Consumed (l) | 665 | 567 | 274 | 1506 |
| Fuel Economy (km/l) | 0.2 | 0.9 | 0.2 | 0.5 |
| CO Emissions (kg) | 12.37 | 10.54 | 5.10 | 28.01 |
| NOx Emissions (kg) | 2.39 | 2.03 | 0.98 | 5.41 |
| VOC Emissions (kg) | 2.85 | 2.43 | 1.18 | 6.46 |
| Unserviced Vehicles (#) | 256 | 829 | 273 | 1357 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 822 | 831 | 1653 |
| Control Delay / Veh (s/v) | 19 | 30 | 25 |
| Queue Delay / Veh (s/v) | 19 | 0 | 9 |
| Total Delay / Veh (s/v) | 38 | 30 | 34 |
| Total Delay (hr) | 9 | 7 | 16 |
| Stops / Veh | 0.76 | 0.86 | 0.81 |
| Stops (#) | 622 | 717 | 1339 |
| Average Speed (km/hr) | 2 | 8 | 5 |
| Total Travel Time (hr) | 9 | 8 | 17 |
| Distance Traveled (km) | 15 | 71 | 86 |
| Fuel Consumed (l) | 39 | 42 | 81 |
| Fuel Economy (km/l) | 0.4 | 1.7 | 1.1 |
| CO Emissions (kg) | 0.73 | 0.78 | 1.51 |
| NOx Emissions (kg) | 0.14 | 0.15 | 0.29 |
| VOC Emissions (kg) | 0.17 | 0.18 | 0.35 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

37: Av. Dr. Jesuino Marcondes Machado

| Direction | SB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1003 | 648 | 1651 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 4 | 1 | 5 |
| Distance Traveled (km) | 217 | 38 | 256 |
| Fuel Consumed (l) | 21 | 4 | 24 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.38 | 0.07 | 0.45 |
| NOx Emissions (kg) | 0.07 | 0.01 | 0.09 |
| VOC Emissions (kg) | 0.09 | 0.02 | 0.10 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 3241 | 3241 |
| Control Delay / Veh (s/v) | 3 | 3 |
| Queue Delay / Veh (s/v) | 85 | 85 |
| Total Delay / Veh (s/v) | 88 | 88 |
| Total Delay (hr) | 80 | 80 |
| Stops / Veh | 0.19 | 0.19 |
| Stops (#) | 608 | 608 |
| Average Speed (km/hr) | 3 | 3 |
| Total Travel Time (hr) | 84 | 84 |
| Distance Traveled (km) | 217 | 217 |
| Fuel Consumed (l) | 255 | 255 |
| Fuel Economy (km/l) | 0.9 | 0.9 |
| CO Emissions (kg) | 4.74 | 4.74 |
| NOx Emissions (kg) | 0.91 | 0.91 |
| VOC Emissions (kg) | 1.09 | 1.09 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 460 | 2115 | 2575 |
| Control Delay / Veh (s/v) | 46 | 10 | 16 |
| Queue Delay / Veh (s/v) | 203 | 89 | 109 |
| Total Delay / Veh (s/v) | 250 | 98 | 125 |
| Total Delay (hr) | 32 | 58 | 90 |
| Stops / Veh | 0.91 | 0.55 | 0.61 |
| Stops (#) | 418 | 1163 | 1581 |
| Average Speed (km/hr) | 1 | 2 | 2 |
| Total Travel Time (hr) | 33 | 60 | 93 |
| Distance Traveled (km) | 32 | 134 | 166 |
| Fuel Consumed (l) | 101 | 199 | 300 |
| Fuel Economy (km/l) | 0.3 | 0.7 | 0.6 |
| CO Emissions (kg) | 1.87 | 3.70 | 5.57 |
| NOx Emissions (kg) | 0.36 | 0.71 | 1.08 |
| VOC Emissions (kg) | 0.43 | 0.85 | 1.29 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| Direction | EB | NE | All |
|------------------------------|------|------|------|
| Volume (vph) | 655 | 3414 | 4069 |
| Control Delay / Veh (s/v) | 66 | 14 | 23 |
| Queue Delay / Veh (s/v) | 100 | 32 | 43 |
| Total Delay / Veh (s/v) | 166 | 47 | 66 |
| Total Delay (hr) | 30 | 44 | 75 |
| Stops / Veh | 0.89 | 0.62 | 0.66 |
| Stops (#) | 584 | 2120 | 2704 |
| Average Speed (km/hr) | 1 | 13 | 9 |
| Total Travel Time (hr) | 31 | 59 | 90 |
| Distance Traveled (km) | 22 | 750 | 772 |
| Fuel Consumed (l) | 99 | 242 | 341 |
| Fuel Economy (km/l) | 0.2 | 3.1 | 2.3 |
| CO Emissions (kg) | 1.84 | 4.50 | 6.34 |
| NOx Emissions (kg) | 0.35 | 0.87 | 1.22 |
| VOC Emissions (kg) | 0.42 | 1.04 | 1.46 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1463 | 1463 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 58 | 58 |
| Fuel Consumed (l) | 6 | 6 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.10 | 0.10 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coutinho

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 33 | 803 | 836 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 33 | 0 | 33 |
| Average Speed (km/hr) | 50 | 51 | 51 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 27 | 29 |
| Fuel Consumed (l) | 1 | 3 | 3 |
| Fuel Economy (km/l) | NA | 10.5 | 8.3 |
| CO Emissions (kg) | 0.02 | 0.05 | 0.06 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.00 | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

53: Av. Dr. Moraes Salles & Retorno

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 653 | 2 | 655 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.00 |
| Stops (#) | 0 | 2 | 2 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 27 | 0 | 27 |
| Fuel Consumed (l) | 3 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 10.3 |
| CO Emissions (kg) | 0.05 | 0.00 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1425 | 1783 | 3208 |
| Control Delay / Veh (s/v) | 101 | 89 | 94 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 101 | 89 | 94 |
| Total Delay (hr) | 40 | 44 | 84 |
| Stops / Veh | 0.86 | 0.78 | 0.81 |
| Stops (#) | 1226 | 1385 | 2611 |
| Average Speed (km/hr) | 1 | 2 | 2 |
| Total Travel Time (hr) | 41 | 46 | 87 |
| Distance Traveled (km) | 58 | 104 | 162 |
| Fuel Consumed (l) | 144 | 163 | 307 |
| Fuel Economy (km/l) | 0.4 | 0.6 | 0.5 |
| CO Emissions (kg) | 2.67 | 3.04 | 5.71 |
| NOx Emissions (kg) | 0.52 | 0.59 | 1.10 |
| VOC Emissions (kg) | 0.62 | 0.70 | 1.32 |
| Unserviced Vehicles (#) | 181 | 240 | 421 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

56: Rua Barão de Paranapanema & Acesso

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 38 | 248 | 286 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.87 |
| Stops (#) | 0 | 248 | 248 |
| Average Speed (km/hr) | 50 | 49 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 2 | 9 | 10 |
| Fuel Consumed (l) | 0 | 6 | 7 |
| Fuel Economy (km/l) | NA | 1.3 | 1.6 |
| CO Emissions (kg) | 0.00 | 0.12 | 0.12 |
| NOx Emissions (kg) | 0.00 | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.00 | 0.03 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

59: Av. Princesa D'Oeste & retorno

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 1562 | 1562 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 6 | 6 |
| Distance Traveled (km) | 295 | 295 |
| Fuel Consumed (l) | 28 | 28 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.52 | 0.52 |
| NOx Emissions (kg) | 0.10 | 0.10 |
| VOC Emissions (kg) | 0.12 | 0.12 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

61: Av. Princesa D'Oeste & retorno

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 40 | 1075 | 1115 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.04 |
| Stops (#) | 40 | 0 | 40 |
| Average Speed (km/hr) | 49 | 50 | 49 |
| Total Travel Time (hr) | 0 | 0 | 1 |
| Distance Traveled (km) | 1 | 24 | 25 |
| Fuel Consumed (l) | 1 | 2 | 3 |
| Fuel Economy (km/l) | 1.3 | 10.5 | 7.6 |
| CO Emissions (kg) | 0.02 | 0.04 | 0.06 |
| NOx Emissions (kg) | 0.00 | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.00 | 0.01 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 726 | 1534 | 2260 |
| Control Delay / Veh (s/v) | 8 | 15 | 13 |
| Queue Delay / Veh (s/v) | 14 | 71 | 52 |
| Total Delay / Veh (s/v) | 22 | 85 | 65 |
| Total Delay (hr) | 5 | 36 | 41 |
| Stops / Veh | 0.08 | 0.60 | 0.44 |
| Stops (#) | 61 | 926 | 987 |
| Average Speed (km/hr) | 5 | 3 | 3 |
| Total Travel Time (hr) | 5 | 39 | 44 |
| Distance Traveled (km) | 27 | 104 | 131 |
| Fuel Consumed (l) | 16 | 132 | 148 |
| Fuel Economy (km/l) | 1.6 | 0.8 | 0.9 |
| CO Emissions (kg) | 0.30 | 2.45 | 2.75 |
| NOx Emissions (kg) | 0.06 | 0.47 | 0.53 |
| VOC Emissions (kg) | 0.07 | 0.56 | 0.63 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

63: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1852 | 624 | 2476 |
| Control Delay / Veh (s/v) | 20 | 10 | 17 |
| Queue Delay / Veh (s/v) | 0 | 87 | 22 |
| Total Delay / Veh (s/v) | 20 | 97 | 39 |
| Total Delay (hr) | 10 | 17 | 27 |
| Stops / Veh | 0.83 | 0.64 | 0.78 |
| Stops (#) | 1535 | 402 | 1937 |
| Average Speed (km/hr) | 6 | 1 | 3 |
| Total Travel Time (hr) | 12 | 17 | 29 |
| Distance Traveled (km) | 74 | 20 | 93 |
| Fuel Consumed (l) | 70 | 58 | 127 |
| Fuel Economy (km/l) | 1.1 | 0.3 | 0.7 |
| CO Emissions (kg) | 1.30 | 1.07 | 2.37 |
| NOx Emissions (kg) | 0.25 | 0.21 | 0.46 |
| VOC Emissions (kg) | 0.30 | 0.25 | 0.55 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

64: Av. Dr. Moraes Salles & R. Antônio A. de Camargo

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 452 | 13 | 465 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.03 |
| Stops (#) | 0 | 13 | 13 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 28 | 1 | 29 |
| Fuel Consumed (l) | 3 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 9.5 |
| CO Emissions (kg) | 0.05 | 0.01 | 0.06 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

66: Av. José de Souza Campos

| Direction | NB | NW | All |
|------------------------------|------|------|-------|
| Volume (vph) | 1803 | 2257 | 4060 |
| Control Delay / Veh (s/v) | 135 | 167 | 153 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 135 | 167 | 153 |
| Total Delay (hr) | 68 | 105 | 172 |
| Stops / Veh | 0.62 | 0.78 | 0.71 |
| Stops (#) | 1120 | 1755 | 2875 |
| Average Speed (km/hr) | 1 | 1 | 1 |
| Total Travel Time (hr) | 69 | 107 | 176 |
| Distance Traveled (km) | 74 | 89 | 163 |
| Fuel Consumed (l) | 219 | 338 | 558 |
| Fuel Economy (km/l) | 0.3 | 0.3 | 0.3 |
| CO Emissions (kg) | 4.08 | 6.29 | 10.37 |
| NOx Emissions (kg) | 0.79 | 1.21 | 2.00 |
| VOC Emissions (kg) | 0.94 | 1.45 | 2.39 |
| Unserviced Vehicles (#) | 377 | 542 | 919 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | SB | All |
|------------------------------|------|-------|------|-------|
| Volume (vph) | 2427 | 2979 | 1003 | 6409 |
| Control Delay / Veh (s/v) | 101 | 141 | 105 | 120 |
| Queue Delay / Veh (s/v) | 0 | 124 | 0 | 58 |
| Total Delay / Veh (s/v) | 101 | 265 | 105 | 178 |
| Total Delay (hr) | 68 | 220 | 29 | 317 |
| Stops / Veh | 0.77 | 0.80 | 0.82 | 0.79 |
| Stops (#) | 1876 | 2374 | 827 | 5077 |
| Average Speed (km/hr) | 6 | 1 | 2 | 2 |
| Total Travel Time (hr) | 78 | 223 | 31 | 331 |
| Distance Traveled (km) | 479 | 175 | 63 | 717 |
| Fuel Consumed (l) | 276 | 678 | 106 | 1060 |
| Fuel Economy (km/l) | 1.7 | 0.3 | 0.6 | 0.7 |
| CO Emissions (kg) | 5.13 | 12.61 | 1.97 | 19.71 |
| NOx Emissions (kg) | 0.99 | 2.43 | 0.38 | 3.80 |
| VOC Emissions (kg) | 1.18 | 2.91 | 0.45 | 4.55 |
| Unserviced Vehicles (#) | 355 | 626 | 135 | 1116 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

71: Av. Guarani & Av. Dr. Moraes Salles

| Direction | EB | WB | NB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 2089 | 3145 | 531 | 5765 |
| Control Delay / Veh (s/v) | 0 | 0 | 383 | 35 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 383 | 35 |
| Total Delay (hr) | 0 | 0 | 57 | 57 |
| Stops / Veh | 0.00 | 0.00 | 1.00 | 0.09 |
| Stops (#) | 0 | 0 | 531 | 531 |
| Average Speed (km/hr) | 50 | 50 | 1 | 11 |
| Total Travel Time (hr) | 3 | 12 | 57 | 72 |
| Distance Traveled (km) | 128 | 621 | 46 | 795 |
| Fuel Consumed (l) | 12 | 59 | 173 | 244 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 0.3 | 3.3 |
| CO Emissions (kg) | 0.23 | 1.10 | 3.22 | 4.54 |
| NOx Emissions (kg) | 0.04 | 0.21 | 0.62 | 0.88 |
| VOC Emissions (kg) | 0.05 | 0.25 | 0.74 | 1.05 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

Network Totals

| | |
|------------------------------|--------|
| Number of Intersections | 36 |
| Control Delay / Veh (s/v) | 53 |
| Queue Delay / Veh (s/v) | 32 |
| Total Delay / Veh (s/v) | 85 |
| Total Delay (hr) | 2091 |
| Stops / Veh | 0.53 |
| Stops (#) | 46445 |
| Average Speed (km/hr) | 4 |
| Total Travel Time (hr) | 2279 |
| Distance Traveled (km) | 9368 |
| Fuel Consumed (l) | 7725 |
| Fuel Economy (km/l) | 1.2 |
| CO Emissions (kg) | 143.68 |
| NOx Emissions (kg) | 27.73 |
| VOC Emissions (kg) | 33.14 |
| Unserved Vehicles (#) | 5236 |
| Vehicles in dilemma zone (#) | 0 |
| Performance Index | 2220.4 |

Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 1329 | 800 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.944 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2787 | 3341 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2787 | 3341 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 100% | 116% | 116% | 116% |
| Adj. Flow (vph) | 0 | 1445 | 1067 | 637 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1445 | 1704 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 94.1% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 261 | 766 | 34 | 198 | 630 | 32 | 14 | 103 | 24 | 25 | 118 | 216 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.991 | | | 0.992 | | | 0.971 | | | 0.906 | |
| Flt Protected | | 0.987 | | | 0.987 | | | 0.987 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 3353 | 0 | 0 | 3305 | 0 | 0 | 3234 | 0 | 0 | 3095 | 0 |
| Flt Permitted | | 0.987 | | | 0.987 | | | 0.521 | | | 0.907 | |
| Satd. Flow (perm) | 0 | 3353 | 0 | 0 | 3305 | 0 | 0 | 1707 | 0 | 0 | 2815 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 96.9 | | | 97.1 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 7.0 | | | 7.0 | |
| Peak Hour Factor | 0.82 | 0.95 | 0.57 | 0.77 | 0.79 | 0.54 | 0.25 | 0.79 | 0.60 | 0.54 | 0.54 | 0.49 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 100% | 116% | 100% | 116% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 318 | 806 | 69 | 298 | 797 | 59 | 65 | 130 | 46 | 46 | 219 | 441 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1193 | 0 | 0 | 1154 | 0 | 0 | 241 | 0 | 0 | 706 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (m) | 2.0 | 10.0 | | 2.0 | 10.0 | | 2.0 | 10.0 | | 2.0 | 10.0 | |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Size(m) | 2.0 | 0.6 | | 2.0 | 0.6 | | 2.0 | 0.6 | | 2.0 | 0.6 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | 9.4 | | | 9.4 | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | 0.6 | | | 0.6 | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 3 | 3 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 51.0 | 51.0 | 0.0 | 50.0 | 50.0 | 0.0 | 39.0 | 39.0 | 0.0 | 39.0 | 39.0 | 0.0 |

Lanes, Volumes, Timings
 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

06/05/2016

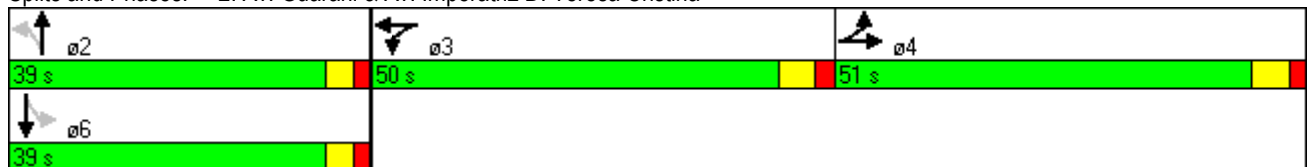


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|--------|------|-------|--------|------|
| Total Split (%) | 36.4% | 36.4% | 0.0% | 35.7% | 35.7% | 0.0% | 27.9% | 27.9% | 0.0% | 27.9% | 27.9% | 0.0% |
| Maximum Green (s) | 45.0 | 45.0 | | 44.0 | 44.0 | | 34.0 | 34.0 | | 34.0 | 34.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.0 | 6.0 | 4.0 | 6.0 | 6.0 | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | Max | Max | | Max | Max | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 45.0 | | | 44.0 | | | 34.0 | | | 34.0 | |
| Actuated g/C Ratio | | 0.32 | | | 0.31 | | | 0.24 | | | 0.24 | |
| v/c Ratio | | 1.11 | | | 1.11 | | | 1.23dl | | | 1.17dr | |
| Control Delay | | 105.4 | | | 107.6 | | | 53.3 | | | 94.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 105.4 | | | 107.6 | | | 53.3 | | | 94.2 | |
| LOS | | F | | | F | | | D | | | F | |
| Approach Delay | | 105.4 | | | 107.6 | | | 53.3 | | | 94.2 | |
| Approach LOS | | F | | | F | | | D | | | F | |

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Natural Cycle: 140
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 100.0
 Intersection LOS: F
 Intersection Capacity Utilization 88.6%
 ICU Level of Service E
 Analysis Period (min) 15
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2484 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.992 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4944 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4944 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 116% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2700 | 155 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2855 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 54.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 501 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 1017 | 1927 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.981 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.981 | |
| Satd. Flow (prot) | 0 | 3405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4739 | 0 |
| Flt Permitted | | | | | | | | | | | 0.981 | |
| Satd. Flow (perm) | 0 | 3405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4739 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 1.00 | 0.61 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.91 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 501 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 1338 | 2118 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 573 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3456 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | | 2 | | | | | | | | 1 | 2 | |
| Detector Template | | Thru | | | | | | | | Left | Thru | |
| Leading Detector (m) | | 10.0 | | | | | | | | 2.0 | 10.0 | |
| Trailing Detector (m) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Position(m) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Size(m) | | 0.6 | | | | | | | | 2.0 | 0.6 | |
| Detector 1 Type | | Cl+Ex | | | | | | | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | | | | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | | | | | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | | | | | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | | | | | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | | | | 0.0 | |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Detector Phase | | 4 | | | | | | | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 33.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 117.0 | 117.0 | 0.0 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

06/05/2016

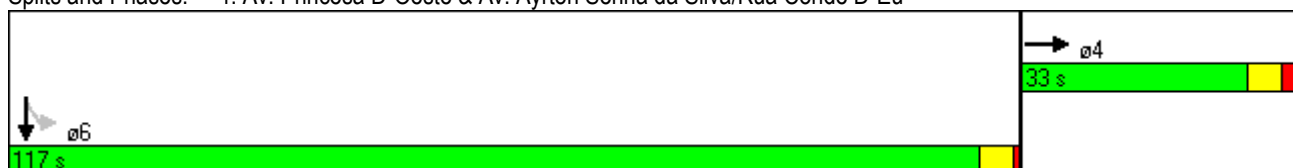


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|------|------|------|------|------|------|------|-------|--------|------|
| Total Split (%) | 0.0% | 22.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 78.0% | 78.0% | 0.0% |
| Maximum Green (s) | | 26.0 | | | | | | | | 112.0 | 112.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 3.0 | 3.0 | |
| Recall Mode | | None | | | | | | | | C-Max | C-Max | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 26.0 | | | | | | | | | 112.0 | |
| Actuated g/C Ratio | | 0.17 | | | | | | | | | 0.75 | |
| v/c Ratio | | 0.97 | | | | | | | | | 1.07dl | |
| Control Delay | | 91.6 | | | | | | | | | 7.3 | |
| Queue Delay | | 0.0 | | | | | | | | | 83.8 | |
| Total Delay | | 91.6 | | | | | | | | | 91.1 | |
| LOS | | F | | | | | | | | | F | |
| Approach Delay | | 91.6 | | | | | | | | | 91.1 | |
| Approach LOS | | F | | | | | | | | | F | |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 63 (42%), Referenced to phase 6:SBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 91.2 Intersection LOS: F
 Intersection Capacity Utilization 83.1% ICU Level of Service E
 Analysis Period (min) 15
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 501 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2944 | 1080 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.959 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4912 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4912 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.89 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 539 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3200 | 1213 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 539 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4413 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | | 2 | | | | | | | | | 2 | |
| Detector Template | | Thru | | | | | | | | | Thru | |
| Leading Detector (m) | | 10.0 | | | | | | | | | 10.0 | |
| Trailing Detector (m) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Position(m) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Size(m) | | 0.6 | | | | | | | | | 0.6 | |
| Detector 1 Type | | Cl+Ex | | | | | | | | | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 1 Delay (s) | | 0.0 | | | | | | | | | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | | | | | | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | | | | | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | | | | | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | | | | 0.0 | |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Detector Phase | | 4 | | | | | | | | | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | | | | | | | 4.0 | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | 0.0 | 27.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 123.0 | 0.0 |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016

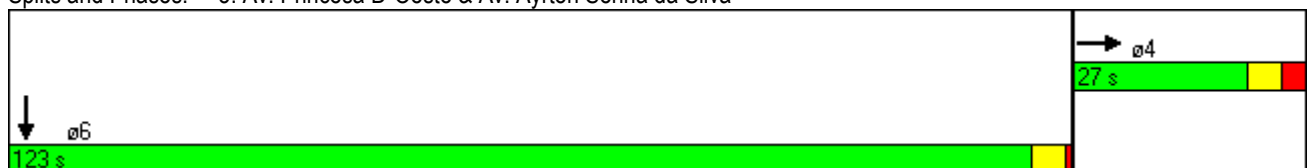


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|------|------|------|------|------|------|------|------|-------|-------|
| Total Split (%) | 0.0% | 18.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 82.0% | 0.0% |
| Maximum Green (s) | | 20.0 | | | | | | | | | 118.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | | | 3.0 |
| Recall Mode | | None | | | | | | | | | | C-Max |
| Walk Time (s) | | 5.0 | | | | | | | | | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | | 0 |
| Act Effct Green (s) | | 20.0 | | | | | | | | | | 118.0 |
| Actuated g/C Ratio | | 0.13 | | | | | | | | | | 0.79 |
| v/c Ratio | | 1.18 | | | | | | | | | | 1.14 |
| Control Delay | | 154.7 | | | | | | | | | | 83.0 |
| Queue Delay | | 74.7 | | | | | | | | | | 76.7 |
| Total Delay | | 229.3 | | | | | | | | | | 159.7 |
| LOS | | F | | | | | | | | | | F |
| Approach Delay | | 229.3 | | | | | | | | | | 159.7 |
| Approach LOS | | F | | | | | | | | | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 59 (39%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.18 |
| Intersection Signal Delay: | 167.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 104.9% |
| ICU Level of Service | G |
| Analysis Period (min) | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 2476 | 7 | 662 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1596 | 5131 | 0 | 3505 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1596 | 5131 | 0 | 3505 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.87 | 0.44 | 0.88 |
| Growth Factor | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 366 | 2846 | 18 | 752 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 366 | 2864 | 0 | 752 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 15 | |
| Number of Detectors | 1 | 2 | | 2 |
| Detector Template | Right | Thru | | Thru |
| Leading Detector (m) | 2.0 | 10.0 | | 10.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Size(m) | 2.0 | 0.6 | | 0.6 |
| Detector 1 Type | CI+Ex | CI+Ex | | CI+Ex |
| Detector 1 Channel | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(m) | | 9.4 | | 9.4 |
| Detector 2 Size(m) | | 0.6 | | 0.6 |
| Detector 2 Type | | CI+Ex | | CI+Ex |
| Detector 2 Channel | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Detector Phase | | 6 | | 8 |
| Switch Phase | | | | |
| Minimum Initial (s) | | 4.0 | | 4.0 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|-------------------------|-------|-------|------|-------|
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | 0.0 | 103.0 | 0.0 | 47.0 |
| Total Split (%) | 0.0% | 68.7% | 0.0% | 31.3% |
| Maximum Green (s) | | 98.0 | | 42.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Vehicle Extension (s) | | 3.0 | | 3.0 |
| Recall Mode | | C-Max | | None |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 150.0 | 102.7 | | 37.3 |
| Actuated g/C Ratio | 1.00 | 0.68 | | 0.25 |
| v/c Ratio | 0.23 | 0.82 | | 0.86 |
| Control Delay | 0.3 | 20.0 | | 34.7 |
| Queue Delay | 0.3 | 1.8 | | 0.0 |
| Total Delay | 0.6 | 21.8 | | 34.7 |
| LOS | A | C | | C |
| Approach Delay | | 21.8 | | 34.7 |
| Approach LOS | | C | | C |

Intersection Summary

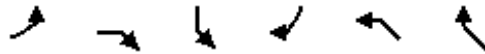
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 51 (34%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.86 |
| Intersection Signal Delay: | 22.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 74.7% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

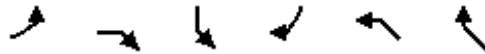
06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|--------|------|
| Lane Configurations | | | | | | | |
| Volume (vph) | 1931 | 0 | 0 | 0 | 0 | 2342 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | 0.850 | |
| Fl _t Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3467 | 0 | 0 | 0 | 0 | 3573 | |
| Fl _t Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3467 | 0 | 0 | 0 | 0 | 3573 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.86 | 0.92 | 0.92 | 0.92 | 0.92 | 0.67 | |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 100% | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 2245 | 0 | 0 | 0 | 0 | 3496 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2245 | 0 | 0 | 0 | 0 | 3496 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Number of Detectors | 1 | | | | | 1 | |
| Detector Template | Left | | | | | Right | |
| Leading Detector (m) | 2.0 | | | | | 2.0 | |
| Trailing Detector (m) | 0.0 | | | | | 0.0 | |
| Detector 1 Position(m) | 0.0 | | | | | 0.0 | |
| Detector 1 Size(m) | 2.0 | | | | | 2.0 | |
| Detector 1 Type | Cl+Ex | | | | | Cl+Ex | |
| Detector 1 Channel | | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | | | 0.0 | |
| Detector 1 Queue (s) | 0.0 | | | | | 0.0 | |
| Detector 1 Delay (s) | 0.0 | | | | | 0.0 | |
| Turn Type | NA | | | | | custom | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | 2 | |
| Detector Phase | 4 | | | | | 2 | |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 4.0 | | | | | 4.0 | 4.0 |
| Minimum Split (s) | 22.0 | | | | | 22.0 | 22.0 |
| Total Split (s) | 63.0 | 0.0 | 0.0 | 0.0 | 0.0 | 87.0 | 63.0 |
| Total Split (%) | 42.0% | 0.0% | 0.0% | 0.0% | 0.0% | 58.0% | 42% |
| Maximum Green (s) | 57.0 | | | | | 81.0 | 57.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

06/05/2016



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|-------------------------|-------|-----|-----|-----|-----|-------|-------|
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | 3.0 | | | | | 3.0 | 3.0 |
| Recall Mode | C-Max | | | | | None | C-Max |
| Walk Time (s) | 5.0 | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 | 0 |
| Act Effct Green (s) | 57.0 | | | | | 81.0 | |
| Actuated g/C Ratio | 0.38 | | | | | 0.54 | |
| v/c Ratio | 1.70 | | | | | 1.81 | |
| Control Delay | 350.9 | | | | | 388.2 | |
| Queue Delay | 0.0 | | | | | 18.6 | |
| Total Delay | 350.9 | | | | | 406.8 | |
| LOS | F | | | | | F | |
| Approach Delay | 350.9 | | | | | | |
| Approach LOS | F | | | | | | |

Intersection Summary

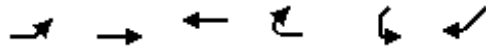
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 0 (0%), Referenced to phase 4:EBL and 8:Ped, Start of Green, Master Intersection |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.81 |
| Intersection Signal Delay: | 384.9 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 119.7% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 7: Av. Princesa D'Oeste

| | |
|------------|------------|
| ø2 87 s | ø4 63 s |
| | ø8 63 s |

Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 501 | 545 | 0 | 0 | 0 | 1080 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1717 | 1807 | 0 | 0 | 0 | 2703 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1717 | 1807 | 0 | 0 | 0 | 2703 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.93 | 0.65 | 0.92 | 0.92 | 0.92 | 0.89 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 100% |
| Adj. Flow (vph) | 539 | 838 | 0 | 0 | 0 | 1213 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 539 | 838 | 0 | 0 | 0 | 1213 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.1% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 390 | 302 | 15 | 112 | 376 | 38 | 11 | 166 | 163 | 15 | 284 | 546 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | | | 0.985 | | | 0.939 | | | 0.917 | |
| Flt Protected | | 0.973 | | | 0.987 | | | 0.997 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1690 | 0 | 0 | 1711 | 0 | 0 | 1708 | 0 | 0 | 1655 | 0 |
| Flt Permitted | | 0.973 | | | 0.987 | | | 0.997 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1690 | 0 | 0 | 1711 | 0 | 0 | 1708 | 0 | 0 | 1655 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.72 | 0.88 | 0.59 | 0.50 | 0.81 | 0.86 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 424 | 328 | 19 | 180 | 427 | 75 | 26 | 238 | 220 | 19 | 358 | 593 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 771 | 0 | 0 | 682 | 0 | 0 | 484 | 0 | 0 | 970 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 136.8% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 751 | 639 | 879 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.923 | |
| Flt Protected | | | | | 0.976 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1667 | 3304 | 0 |
| Flt Permitted | | | | | 0.976 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1667 | 3304 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.78 | 0.78 | 0.88 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 963 | 950 | 999 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 963 | 1949 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 0.98 | 0.98 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 52.3% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 392 | 3358 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.995 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3467 | 5008 | 0 | 4879 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3467 | 5008 | 0 | 4879 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.93 | 0.90 | 0.67 | 0.95 |
| Growth Factor | 100% | 100% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 422 | 3731 | 119 | 1393 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 422 | 3850 | 0 | 1393 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.03 | 1.03 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | |
| Number of Detectors | 1 | 2 | | 2 |
| Detector Template | Left | Thru | | Thru |
| Leading Detector (m) | 2.0 | 10.0 | | 10.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Size(m) | 2.0 | 0.6 | | 0.6 |
| Detector 1 Type | CI+Ex | CI+Ex | | CI+Ex |
| Detector 1 Channel | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(m) | | 9.4 | | 9.4 |
| Detector 2 Size(m) | | 0.6 | | 0.6 |
| Detector 2 Type | | CI+Ex | | CI+Ex |
| Detector 2 Channel | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Detector Phase | 8 | 6 | | 4 |
| Switch Phase | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 42.0 | 108.0 | 0.0 | 42.0 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

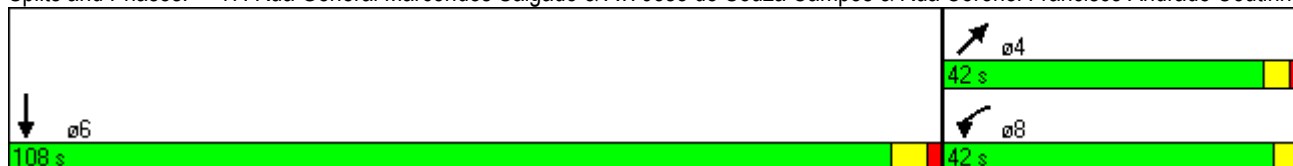


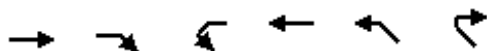
| Lane Group | WBL2 | SBT | SBR2 | NET |
|-------------------------|-------|-------|------|-------|
| Total Split (%) | 28.0% | 72.0% | 0.0% | 28.0% |
| Maximum Green (s) | 38.0 | 102.0 | | 37.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 |
| Recall Mode | None | C-Max | | None |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 38.0 | 102.0 | | 37.0 |
| Actuated g/C Ratio | 0.25 | 0.68 | | 0.25 |
| v/c Ratio | 0.48 | 1.13 | | 1.16 |
| Control Delay | 86.2 | 88.0 | | 124.0 |
| Queue Delay | 674.4 | 75.5 | | 600.8 |
| Total Delay | 760.6 | 163.5 | | 724.8 |
| LOS | F | F | | F |
| Approach Delay | | 163.5 | | 724.8 |
| Approach LOS | | F | | F |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 48 (32%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.16 |
| Intersection Signal Delay: | 346.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 115.9% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho





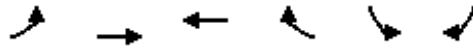
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 1100 | 338 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.952 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3380 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.89 | 0.67 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1236 | 585 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1821 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 46.3% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 1845 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 1845 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.56 | 0.96 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 153 | 366 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 153 | 366 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.6% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

06/05/2016



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 670 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2677 | 1805 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2677 | 1805 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.88 | 0.56 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 761 | 153 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 761 | 153 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↔ | | | | | | ↕↕↕ | | | | |
| Volume (vph) | 339 | 1178 | 0 | 0 | 0 | 0 | 0 | 1224 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.976 | | | | |
| Flt Protected | | 0.989 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3500 | 0 | 0 | 0 | 0 | 0 | 4769 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.989 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3500 | 0 | 0 | 0 | 0 | 0 | 4769 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.80 | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.88 | 0.78 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 424 | 1550 | 0 | 0 | 0 | 0 | 0 | 1391 | 266 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1974 | 0 | 0 | 0 | 0 | 0 | 1657 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | 1 | 2 | | | | | | 2 | | | | |
| Detector Template | Left | Thru | | | | | | Thru | | | | |
| Leading Detector (m) | 2.0 | 10.0 | | | | | | 10.0 | | | | |
| Trailing Detector (m) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Position(m) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Size(m) | 2.0 | 0.6 | | | | | | 0.6 | | | | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | Cl+Ex | | | | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | 0.0 | | | | |
| Detector 2 Position(m) | | 9.4 | | | | | | 9.4 | | | | |
| Detector 2 Size(m) | | 0.6 | | | | | | 0.6 | | | | |
| Detector 2 Type | | Cl+Ex | | | | | | Cl+Ex | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | 0.0 | | | | |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Detector Phase | 4 | 4 | | | | | | 2 | | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 48.0 | 48.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 32.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|------|------|-------|------|------|------|------|
| Total Split (%) | 60.0% | 60.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 40.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 41.0 | 41.0 | | | | | | 27.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 7.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | 3.0 | | | | |
| Recall Mode | None | None | | | | | | Max | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 41.0 | | | | | | 27.0 | | | | |
| Actuated g/C Ratio | | 0.51 | | | | | | 0.34 | | | | |
| v/c Ratio | | 1.10 | | | | | | 1.03 | | | | |
| Control Delay | | 75.8 | | | | | | 58.0 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 75.8 | | | | | | 58.0 | | | | |
| LOS | | E | | | | | | E | | | | |
| Approach Delay | | 75.8 | | | | | | 58.0 | | | | |
| Approach LOS | | E | | | | | | E | | | | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Natural Cycle: 120

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 67.7

Intersection LOS: E

Intersection Capacity Utilization 80.7%

ICU Level of Service D

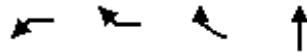
Analysis Period (min) 15

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

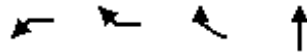


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 1197 | 662 | 270 | 2064 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.974 | 0.850 | | |
| Flt Protected | 0.960 | | | |
| Satd. Flow (prot) | 3401 | 1416 | 0 | 5136 |
| Flt Permitted | 0.960 | | | |
| Satd. Flow (perm) | 3401 | 1416 | 0 | 5136 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.85 | 0.88 | 0.82 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 1408 | 752 | 329 | 2400 |
| Shared Lane Traffic (%) | | 40% | | |
| Lane Group Flow (vph) | 1709 | 780 | 0 | 2400 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.00 | 1.02 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Number of Detectors | 1 | 1 | | 2 |
| Detector Template | Left | Right | | Thru |
| Leading Detector (m) | 2.0 | 2.0 | | 10.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Size(m) | 2.0 | 2.0 | | 0.6 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex |
| Detector 1 Channel | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 |
| Detector 2 Position(m) | | | | 9.4 |
| Detector 2 Size(m) | | | | 0.6 |
| Detector 2 Type | | | | Cl+Ex |
| Detector 2 Channel | | | | |
| Detector 2 Extend (s) | | | | 0.0 |
| Turn Type | NA | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Detector Phase | 8 | 8 | | 2 |
| Switch Phase | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 80.0 | 80.0 | 0.0 | 70.0 |

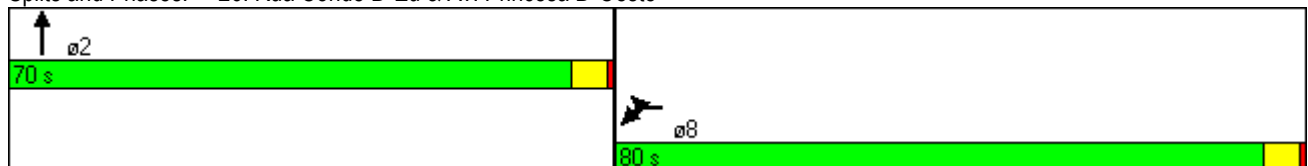


| Lane Group | WBL | WBR | WBR2 | NBT |
|-------------------------|-------|-------|------|-------|
| Total Split (%) | 53.3% | 53.3% | 0.0% | 46.7% |
| Maximum Green (s) | 75.0 | 75.0 | | 65.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 4.0 | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 |
| Recall Mode | None | None | | C-Max |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 75.0 | 75.0 | | 65.0 |
| Actuated g/C Ratio | 0.50 | 0.50 | | 0.43 |
| v/c Ratio | 1.00 | 1.10 | | 1.08 |
| Control Delay | 60.1 | 100.9 | | 79.3 |
| Queue Delay | 137.5 | 388.5 | | 16.8 |
| Total Delay | 197.6 | 489.4 | | 96.1 |
| LOS | F | F | | F |
| Approach Delay | 289.1 | | | 96.1 |
| Approach LOS | F | | | F |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 64 (43%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.10 |
| Intersection Signal Delay: | 194.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 92.1% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|-----|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1931 | 2627 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3398 | 5033 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3398 | 5033 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.86 | 0.90 | |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 100% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2245 | 2919 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2245 | 2919 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Number of Detectors | | | | | 1 | 2 | |
| Detector Template | | | | | Left | Thru | |
| Leading Detector (m) | | | | | 2.0 | 10.0 | |
| Trailing Detector (m) | | | | | 0.0 | 0.0 | |
| Detector 1 Position(m) | | | | | 0.0 | 0.0 | |
| Detector 1 Size(m) | | | | | 2.0 | 0.6 | |
| Detector 1 Type | | | | | CI+Ex | CI+Ex | |
| Detector 1 Channel | | | | | | | |
| Detector 1 Extend (s) | | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | | | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | | | | | 9.4 | |
| Detector 2 Size(m) | | | | | | 0.6 | |
| Detector 2 Type | | | | | | CI+Ex | |
| Detector 2 Channel | | | | | | | |
| Detector 2 Extend (s) | | | | | | 0.0 | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Detector Phase | | | | | 6 | 6 | |
| Switch Phase | | | | | | | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|-------------------------|------|------|------|------|-------|-------|------|
| Minimum Initial (s) | | | | | 4.0 | 4.0 | 3.0 |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 72.0 | 72.0 | 8.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 90.0% | 90.0% | 10% |
| Maximum Green (s) | | | | | 66.0 | 66.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | 3.0 |
| Recall Mode | | | | | Max | Max | None |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 87.0 | 87.0 | |
| Actuated g/C Ratio | | | | | 1.00 | 1.00 | |
| v/c Ratio | | | | | 0.66 | 0.58 | |
| Control Delay | | | | | 1.0 | 0.5 | |
| Queue Delay | | | | | 0.0 | 0.0 | |
| Total Delay | | | | | 1.0 | 0.5 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 0.7 | |
| Approach LOS | | | | | | A | |

Intersection Summary

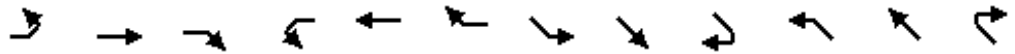
| | |
|-----------------------------------|------------------|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 87 |
| Natural Cycle: | 60 |
| Control Type: | Semi Act-Uncoord |
| Maximum v/c Ratio: | 0.66 |
| Intersection Signal Delay: | 0.7 |
| Intersection Capacity Utilization | 69.5% |
| Analysis Period (min) | 15 |
| Intersection LOS: | A |
| ICU Level of Service | C |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

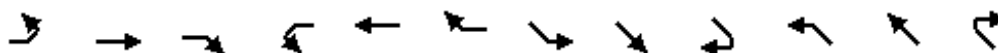
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 2163 | 0 | 0 | 1423 | 247 | 0 | 0 | 0 | 564 | 310 | 303 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.974 | | | | | | 0.967 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4885 | 0 | 0 | 4744 | 0 | 0 | 0 | 0 | 1805 | 1695 | 1490 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4885 | 0 | 0 | 4744 | 0 | 0 | 0 | 0 | 1805 | 1695 | 1490 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.92 | 0.80 | 0.92 | 0.92 | 0.85 | 0.71 | 0.92 | 0.92 | 0.92 | 0.81 | 0.84 | 0.67 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 3% | 3% |
| Adj. Flow (vph) | 0 | 2704 | 0 | 0 | 1942 | 404 | 0 | 0 | 0 | 696 | 369 | 525 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 20% |
| Lane Group Flow (vph) | 0 | 2704 | 0 | 0 | 2346 | 0 | 0 | 0 | 0 | 696 | 474 | 420 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | | 2 | | | 2 | | | | | 1 | 2 | 1 |
| Detector Template | | Thru | | | Thru | | | | | Left | Thru | Right |
| Leading Detector (m) | | 10.0 | | | 10.0 | | | | | 2.0 | 10.0 | 2.0 |
| Trailing Detector (m) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | | 0.6 | | | 0.6 | | | | | 2.0 | 0.6 | 2.0 |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | | | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | 9.4 | | | 9.4 | | | | | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | | 0.6 | | | | | | 0.6 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | 0.0 | |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Detector Phase | | 4 | | | 8 | | | | | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | 4.0 | | | | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | 0.0 | 47.0 | 0.0 | 0.0 | 47.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.0 | 33.0 | 33.0 |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

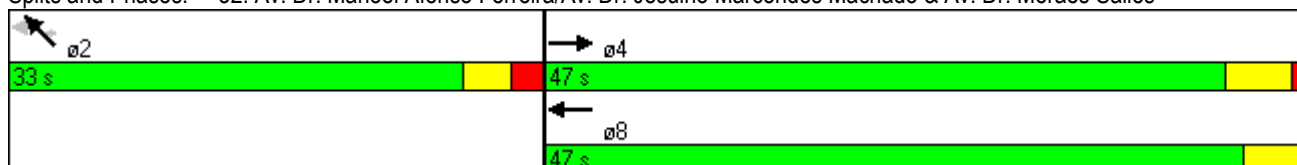


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|-------------------------|------|-------|------|------|-------|------|------|------|------|-------|-------|-------|
| Total Split (%) | 0.0% | 58.8% | 0.0% | 0.0% | 58.8% | 0.0% | 0.0% | 0.0% | 0.0% | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | | 42.0 | | | 43.0 | | | | | 28.0 | 28.0 | 28.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Recall Mode | | C-Max | | | C-Max | | | | | None | None | None |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 42.0 | | | 43.0 | | | | | 28.0 | 28.0 | 28.0 |
| Actuated g/C Ratio | | 0.52 | | | 0.54 | | | | | 0.35 | 0.35 | 0.35 |
| v/c Ratio | | 1.05 | | | 0.92 | | | | | 1.10 | 0.80 | 0.80 |
| Control Delay | | 36.1 | | | 24.5 | | | | | 89.7 | 31.3 | 33.1 |
| Queue Delay | | 142.9 | | | 0.6 | | | | | 192.8 | 184.8 | 169.8 |
| Total Delay | | 179.0 | | | 25.1 | | | | | 282.5 | 216.2 | 202.9 |
| LOS | | F | | | C | | | | | F | F | F |
| Approach Delay | | 179.0 | | | 25.1 | | | | | | 241.7 | |
| Approach LOS | | F | | | C | | | | | | F | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 29 (36%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 110 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.10 |
| Intersection Signal Delay: | 139.6 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 174.5% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

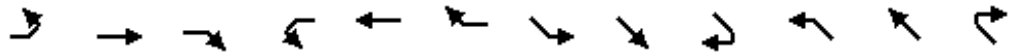
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016

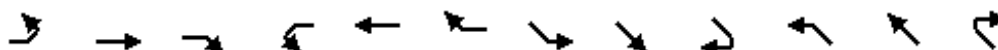


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑ | |
| Volume (vph) | 823 | 239 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 347 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.977 | |
| Flt Protected | | 0.964 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3421 | 0 |
| Flt Permitted | | 0.964 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3421 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.80 | 0.83 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.82 | 0.68 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 0% | 0% |
| Adj. Flow (vph) | 1029 | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 491 | 90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1363 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 581 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Number of Detectors | 1 | 2 | | | | | | | | | | 1 |
| Detector Template | Left | Thru | | | | | | | | | | Left |
| Leading Detector (m) | 2.0 | 10.0 | | | | | | | | | | 2.0 |
| Trailing Detector (m) | 0.0 | 0.0 | | | | | | | | | | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | | | | | | | | | | 0.0 |
| Detector 1 Size(m) | 2.0 | 0.6 | | | | | | | | | | 2.0 |
| Detector 1 Type | Cl+Ex | Cl+Ex | | | | | | | | | | Cl+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | | | | | | | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | | | | | | | | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | | | | | | | | | | 0.0 |
| Detector 2 Position(m) | | 9.4 | | | | | | | | | | |
| Detector 2 Size(m) | | 0.6 | | | | | | | | | | |
| Detector 2 Type | | Cl+Ex | | | | | | | | | | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | | | | | | | | |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | | 2 |
| Detector Phase | 4 | 4 | | | | | | | | | | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | | | | | | | | | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | | 21.0 |
| Total Split (s) | 52.0 | 52.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.0 | 0.0 |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

06/05/2016

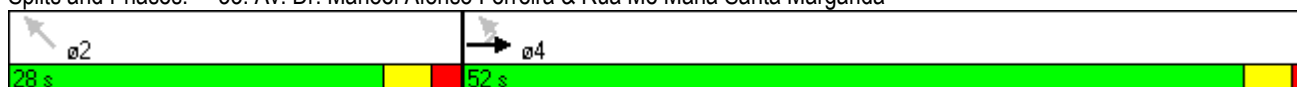


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|-------------------------|-------|--------|------|------|------|------|------|------|------|------|-------|------|
| Total Split (%) | 65.0% | 65.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 35.0% | 0.0% |
| Maximum Green (s) | 48.0 | 48.0 | | | | | | | | | 23.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | | | | | | | 3.0 | |
| Recall Mode | C-Max | C-Max | | | | | | | | | None | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 52.4 | | | | | | | | | 18.6 | |
| Actuated g/C Ratio | | 0.66 | | | | | | | | | 0.23 | |
| v/c Ratio | | 0.88dl | | | | | | | | | 0.73 | |
| Control Delay | | 7.8 | | | | | | | | | 33.8 | |
| Queue Delay | | 0.1 | | | | | | | | | 4.9 | |
| Total Delay | | 8.0 | | | | | | | | | 38.8 | |
| LOS | | A | | | | | | | | | D | |
| Approach Delay | | 8.0 | | | | | | | | | 38.8 | |
| Approach LOS | | A | | | | | | | | | D | |

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 70 (88%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 17.2
 Intersection LOS: B
 Intersection Capacity Utilization 66.2%
 ICU Level of Service C
 Analysis Period (min) 15
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

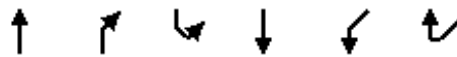
06/05/2016

| | ↑ | ↶ | ↷ | ↓ | ↶ | ↷ |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | | | | ↑↑ | | ↶↶ |
| Volume (vph) | 0 | 0 | 0 | 1430 | 0 | 597 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3503 | 0 | 2758 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3503 | 0 | 2758 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 212.6 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.3 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.88 | 0.92 | 0.71 |
| Growth Factor | 116% | 116% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1625 | 0 | 841 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1625 | 0 | 841 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 42.9% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

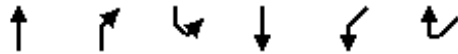


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|-------|-------|------|------|------|-------|-----|
| Lane Configurations | ↑↑↑↑ | | | | | | |
| Volume (vph) | 2801 | 1473 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.941 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4765 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4765 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.94 | 0.77 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Growth Factor | 100% | 100% | 116% | 116% | 116% | 116% | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2980 | 1913 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4893 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 0.95 | 0.95 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Number of Detectors | 2 | | | | | | |
| Detector Template | Thru | | | | | | |
| Leading Detector (m) | 10.0 | | | | | | |
| Trailing Detector (m) | 0.0 | | | | | | |
| Detector 1 Position(m) | 0.0 | | | | | | |
| Detector 1 Size(m) | 0.6 | | | | | | |
| Detector 1 Type | CI+Ex | | | | | | |
| Detector 1 Channel | | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | | | | |
| Detector 1 Queue (s) | 0.0 | | | | | | |
| Detector 1 Delay (s) | 0.0 | | | | | | |
| Detector 2 Position(m) | 9.4 | | | | | | |
| Detector 2 Size(m) | 0.6 | | | | | | |
| Detector 2 Type | CI+Ex | | | | | | |
| Detector 2 Channel | | | | | | | |
| Detector 2 Extend (s) | 0.0 | | | | | | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Detector Phase | 2 | | | | | | |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 4.0 | | | | | | 2.0 |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|-------------------------|--------|------|------|------|------|------|------|
| Total Split (s) | 142.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 |
| Total Split (%) | 94.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5% |
| Maximum Green (s) | 136.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | 3.0 | | | | | | 3.0 |
| Recall Mode | C-Max | | | | | | None |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 150.0 | | | | | | |
| Actuated g/C Ratio | 1.00 | | | | | | |
| v/c Ratio | 1.20dr | | | | | | |
| Control Delay | 19.7 | | | | | | |
| Queue Delay | 155.0 | | | | | | |
| Total Delay | 174.7 | | | | | | |
| LOS | F | | | | | | |
| Approach Delay | 174.7 | | | | | | |
| Approach LOS | F | | | | | | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 82 (55%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.03 |
| Intersection Signal Delay: | 174.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 92.1% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |
| dr Defacto Right Lane. Recode with 1 though lane as a right lane. | |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 392 | 259 | 0 | 2801 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.967 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3252 | 1440 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3252 | 1440 | 0 | 5033 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.84 | 0.92 | 0.83 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 422 | 358 | 0 | 3375 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 33% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 540 | 240 | 0 | 3375 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | Perm | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 0.0 | 36.0 | 36.0 | 114.0 | 114.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 0.0% | 24.0% | 24.0% | 76.0% | 76.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | | | | 31.0 | 31.0 | 108.0 | 108.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 31.0 | 31.0 | | 108.0 | | | | |
| Actuated g/C Ratio | | | | | 0.21 | 0.21 | | 0.72 | | | | |
| v/c Ratio | | | | | 0.80 | 0.81 | | 0.93 | | | | |
| Control Delay | | | | | 66.8 | 77.4 | | 20.4 | | | | |
| Queue Delay | | | | | 671.8 | 668.1 | | 157.6 | | | | |
| Total Delay | | | | | 738.7 | 745.5 | | 178.1 | | | | |
| LOS | | | | | F | F | | F | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

06/05/2016

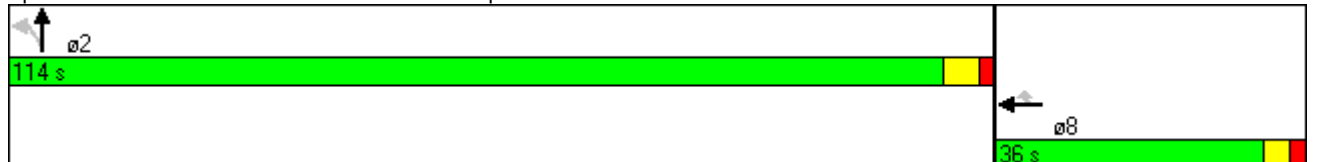


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------|-----|-----|-----|-----|-------|-----|-----|-------|-----|-----|-----|-----|
| Approach Delay | | | | | 740.7 | | | 178.1 | | | | |
| Approach LOS | | | | | F | | | F | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 101 (67%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.93 |
| Intersection Signal Delay: | 283.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 92.1% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 1057 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.927 | |
| Flt Protected | 0.950 | 0.988 | 0.950 | | |
| Satd. Flow (prot) | 1626 | 3383 | 1698 | 4501 | 0 |
| Flt Permitted | 0.950 | 0.988 | 0.950 | | |
| Satd. Flow (perm) | 1626 | 3383 | 1698 | 4501 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 226.1 | |
| Travel Time (s) | | 2.4 | | 16.3 | |
| Peak Hour Factor | 0.29 | 0.90 | 0.89 | 0.95 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 576 | 610 | 869 | 1217 | 1149 |
| Shared Lane Traffic (%) | 33% | | | | |
| Lane Group Flow (vph) | 386 | 800 | 869 | 2366 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Number of Detectors | 1 | 2 | 1 | 2 | |
| Detector Template | Left | Thru | Left | Thru | |
| Leading Detector (m) | 2.0 | 10.0 | 2.0 | 10.0 | |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Size(m) | 2.0 | 0.6 | 2.0 | 0.6 | |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | |
| Detector 1 Channel | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 9.4 | | 9.4 | |
| Detector 2 Size(m) | | 0.6 | | 0.6 | |
| Detector 2 Type | | CI+Ex | | CI+Ex | |
| Detector 2 Channel | | | | | |
| Detector 2 Extend (s) | | 0.0 | | 0.0 | |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Detector Phase | 4 | 4 | 2 | 2 | |
| Switch Phase | | | | | |

Lanes, Volumes, Timings
45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBL | EBT | NEL | NET | NER |
|-------------------------|-------|-------|-------|--------|------|
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 51.0 | 51.0 | 99.0 | 99.0 | 0.0 |
| Total Split (%) | 34.0% | 34.0% | 66.0% | 66.0% | 0.0% |
| Maximum Green (s) | 47.0 | 47.0 | 95.0 | 95.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | C-Max | C-Max | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 42.1 | 42.1 | 99.9 | 99.9 | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.67 | 0.67 | |
| v/c Ratio | 0.85 | 0.84 | 0.77 | 1.15dr | |
| Control Delay | 68.1 | 59.6 | 24.1 | 20.9 | |
| Queue Delay | 671.8 | 119.4 | 0.0 | 3.9 | |
| Total Delay | 739.9 | 178.9 | 24.1 | 24.8 | |
| LOS | F | F | C | C | |
| Approach Delay | | 361.5 | | 24.6 | |
| Approach LOS | | F | | C | |

Intersection Summary

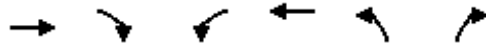
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 121 (81%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.85 |
| Intersection Signal Delay: | 115.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 67.9% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |
| dr Defacto Right Lane. Recode with 1 though lane as a right lane. | |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 06/05/2016

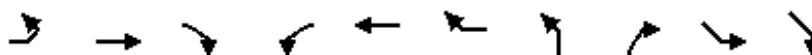


| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1558 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.993 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 5054 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 5054 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.89 | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1751 | 86 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1837 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.5% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coimbra



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1807 | 1551 | 3467 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1807 | 1551 | 3467 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.44 | 0.67 | 0.89 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 18 | 107 | 869 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 18 | 107 | 869 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

Area Type: Other

Control Type: Unsignalized

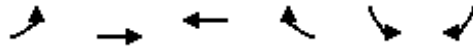
Intersection Capacity Utilization 44.2%

ICU Level of Service A

Analysis Period (min) 15

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 5036 | 0 | 0 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 5036 | 0 | 0 | 1805 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.44 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 778 | 0 | 0 | 18 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 778 | 0 | 0 | 18 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|--------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1558 | 0 | 0 | 2999 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr _t | | 0.850 | | | 0.968 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3610 | 0 | 0 | 4882 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3610 | 0 | 0 | 4882 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.89 | 0.92 | 0.92 | 0.90 | 0.82 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1751 | 0 | 0 | 3332 | 915 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1751 | 0 | 0 | 4247 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Number of Detectors | | 1 | | | 1 | | | |
| Detector Template | | Right | | | | | | |
| Leading Detector (m) | | 2.0 | | | 2.0 | | | |
| Trailing Detector (m) | | 0.0 | | | 0.0 | | | |
| Detector 1 Position(m) | | 0.0 | | | 0.0 | | | |
| Detector 1 Size(m) | | 2.0 | | | 2.0 | | | |
| Detector 1 Type | | Cl+Ex | | | Cl+Ex | | | |
| Detector 1 Channel | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | | | 0.0 | | | |
| Detector 1 Queue (s) | | 0.0 | | | 0.0 | | | |
| Detector 1 Delay (s) | | 0.0 | | | 0.0 | | | |
| Turn Type | | custom | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Detector Phase | | 4 | | | 6 | | | |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | | 4.0 | | | 4.0 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | 0.0 | 56.0 | 0.0 | 0.0 | 94.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 37.3% | 0.0% | 0.0% | 62.7% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | | 52.0 | | | 90.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 09/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|-------------------------|-------|-----|-----|-------|-----|-----|-----|-----|
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | | | | |
| Recall Mode | None | | | C-Max | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | | | |
| Act Effct Green (s) | 52.0 | | | 90.0 | | | | |
| Actuated g/C Ratio | 0.35 | | | 0.60 | | | | |
| v/c Ratio | 1.40 | | | 1.45 | | | | |
| Control Delay | 220.3 | | | 223.8 | | | | |
| Queue Delay | 0.0 | | | 0.0 | | | | |
| Total Delay | 220.3 | | | 223.8 | | | | |
| LOS | F | | | F | | | | |
| Approach Delay | | | | 223.8 | | | | |
| Approach LOS | | | | F | | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 56 (37%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.45 |
| Intersection Signal Delay: | 222.8 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 117.7% |
| ICU Level of Service: | H |
| Analysis Period (min): | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



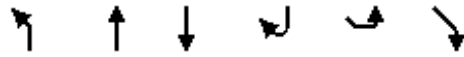
Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

06/05/2016

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↖ | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1976 | 1805 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.55 | 0.82 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 86 | 915 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 86 | 915 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 51.6% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 1431 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4823 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4823 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 181.8 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.1 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.55 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 110 | 1573 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1683 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 73.6% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

06/05/2016



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1971 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1805 | 0 | 0 | 0 | 0 | 4831 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 116.7 | | | 22.0 |
| Travel Time (s) | 2.4 | | 8.4 | | | 1.6 |
| Peak Hour Factor | 0.55 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 110 | 0 | 0 | 0 | 0 | 2166 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 110 | 0 | 0 | 0 | 0 | 2166 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 73.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service D |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↗↗↗ | | |
| Volume (vph) | 501 | 0 | 0 | 1563 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3433 | 0 | 0 | 5085 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.91 | 0.92 | 0.92 |
| Growth Factor | 100% | 116% | 116% | 100% | 116% | 116% |
| Adj. Flow (vph) | 539 | 0 | 0 | 1718 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 539 | 0 | 0 | 1718 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Number of Detectors | 1 | | | 2 | | |
| Detector Template | Left | | | Thru | | |
| Leading Detector (m) | 2.0 | | | 10.0 | | |
| Trailing Detector (m) | 0.0 | | | 0.0 | | |
| Detector 1 Position(m) | 0.0 | | | 0.0 | | |
| Detector 1 Size(m) | 2.0 | | | 0.6 | | |
| Detector 1 Type | CI+Ex | | | CI+Ex | | |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | 0.0 | | |
| Detector 1 Queue (s) | 0.0 | | | 0.0 | | |
| Detector 1 Delay (s) | 0.0 | | | 0.0 | | |
| Detector 2 Position(m) | | | | 9.4 | | |
| Detector 2 Size(m) | | | | 0.6 | | |
| Detector 2 Type | | | | CI+Ex | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | | |
| Turn Type | NA | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Detector Phase | 4 | | | 2 | | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | | 4.0 | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 55.0 | 0.0 | 0.0 | 95.0 | 0.0 | 0.0 |
| Total Split (%) | 36.7% | 0.0% | 0.0% | 63.3% | 0.0% | 0.0% |
| Maximum Green (s) | 48.0 | | | 90.0 | | |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

06/05/2016

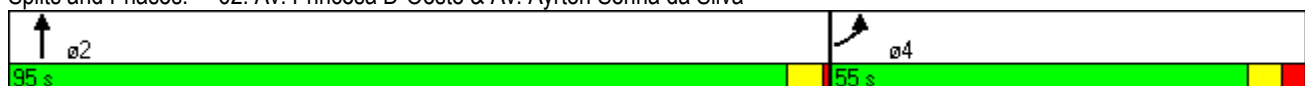


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-------------------------|-------|-----|-----|-------|-----|-----|
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | | |
| Recall Mode | None | | | C-Max | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 29.2 | | | 108.8 | | |
| Actuated g/C Ratio | 0.19 | | | 0.73 | | |
| v/c Ratio | 0.81 | | | 0.47 | | |
| Control Delay | 8.3 | | | 9.4 | | |
| Queue Delay | 674.5 | | | 41.3 | | |
| Total Delay | 682.8 | | | 50.7 | | |
| LOS | F | | | D | | |
| Approach Delay | 682.8 | | | 50.7 | | |
| Approach LOS | F | | | D | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 83 (55%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 201.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 151.2% |
| ICU Level of Service: | H |
| Analysis Period (min): | 15 |

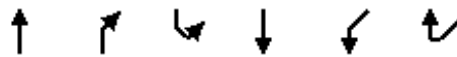
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



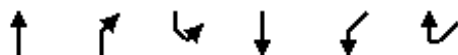
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

06/05/2016



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑↑ | ↔↔ | |
| Volume (vph) | 0 | 0 | 0 | 2827 | 1197 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 5136 | 3467 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 5136 | 3467 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.87 | 0.85 | 0.92 |
| Growth Factor | 116% | 116% | 116% | 100% | 100% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 3249 | 1408 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 3249 | 1408 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Number of Detectors | | | | 2 | 1 | |
| Detector Template | | | | Thru | Left | |
| Leading Detector (m) | | | | 10.0 | 2.0 | |
| Trailing Detector (m) | | | | 0.0 | 0.0 | |
| Detector 1 Position(m) | | | | 0.0 | 0.0 | |
| Detector 1 Size(m) | | | | 0.6 | 2.0 | |
| Detector 1 Type | | | | CI+Ex | CI+Ex | |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | | | 9.4 | | |
| Detector 2 Size(m) | | | | 0.6 | | |
| Detector 2 Type | | | | CI+Ex | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | | |
| Turn Type | | | | NA | NA | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Detector Phase | | | | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | | | | 4.0 | 4.0 | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | 0.0 | 0.0 | 0.0 | 91.0 | 59.0 | 0.0 |
| Total Split (%) | 0.0% | 0.0% | 0.0% | 60.7% | 39.3% | 0.0% |



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|-------------------------|-----|-----|-----|-------|-------|-----|
| Maximum Green (s) | | | | 86.0 | 54.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | |
| Recall Mode | | | | C-Max | None | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 86.0 | 54.0 | |
| Actuated g/C Ratio | | | | 0.57 | 0.36 | |
| v/c Ratio | | | | 1.10 | 1.13 | |
| Control Delay | | | | 69.2 | 80.9 | |
| Queue Delay | | | | 7.3 | 172.4 | |
| Total Delay | | | | 76.5 | 253.3 | |
| LOS | | | | E | F | |
| Approach Delay | | | | 76.5 | 253.3 | |
| Approach LOS | | | | E | F | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 54 (36%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.13 |
| Intersection Signal Delay: | 130.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 97.1% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |

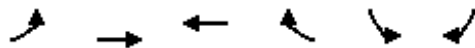
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

06/05/2016



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 567 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.992 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3477 | 0 | 0 | 1644 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3477 | 0 | 0 | 1644 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.88 | 0.25 | 0.92 | 0.79 |
| Growth Factor | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 644 | 37 | 0 | 159 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 681 | 0 | 0 | 159 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.03 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| | ↑ | ↶ | ↷ | ↓ | ↶ | ↷ |
|----------------------------|-------|-------|------|-------|------|--------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 3101 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3574 | 0 | 0 | 0 | 0 | 3646 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3574 | 0 | 0 | 0 | 0 | 3646 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 1.00 |
| Growth Factor | 116% | 116% | 116% | 116% | 116% | 100% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1393 | 0 | 0 | 0 | 0 | 3101 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1393 | 0 | 0 | 0 | 0 | 3101 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Number of Detectors | 2 | | | | | 1 |
| Detector Template | Thru | | | | | Right |
| Leading Detector (m) | 10.0 | | | | | 2.0 |
| Trailing Detector (m) | 0.0 | | | | | 0.0 |
| Detector 1 Position(m) | 0.0 | | | | | 0.0 |
| Detector 1 Size(m) | 0.6 | | | | | 2.0 |
| Detector 1 Type | CI+Ex | | | | | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | | | | 0.0 |
| Detector 1 Queue (s) | 0.0 | | | | | 0.0 |
| Detector 1 Delay (s) | 0.0 | | | | | 0.0 |
| Detector 2 Position(m) | 9.4 | | | | | |
| Detector 2 Size(m) | 0.6 | | | | | |
| Detector 2 Type | CI+Ex | | | | | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | 0.0 | | | | | |
| Turn Type | NA | | | | | custom |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Detector Phase | 4 | | | | | 2 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | | | | | 4.0 |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|-------------------------|-------|------|------|------|------|-------|
| Total Split (%) | 33.3% | 0.0% | 0.0% | 0.0% | 0.0% | 66.7% |
| Maximum Green (s) | 46.0 | | | | | 94.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | | | | 3.0 |
| Recall Mode | C-Max | | | | | None |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 46.0 | | | | | 94.0 |
| Actuated g/C Ratio | 0.31 | | | | | 0.63 |
| v/c Ratio | 1.27 | | | | | 1.36 |
| Control Delay | 163.4 | | | | | 182.8 |
| Queue Delay | 550.8 | | | | | 0.0 |
| Total Delay | 714.2 | | | | | 182.8 |
| LOS | F | | | | | F |
| Approach Delay | 714.2 | | | | | |
| Approach LOS | F | | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 54 (36%), Referenced to phase 4:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.36 |
| Intersection Signal Delay: | 347.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 117.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Maciel

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1947 | 445 | 0 | 2215 | 0 | 186 | 1104 | 95 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3244 | 1398 | 0 | 4838 | 0 | 0 | 3398 | 1552 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3244 | 1398 | 0 | 4838 | 0 | 0 | 3398 | 1552 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.85 | 0.92 | 0.85 | 0.92 | 0.76 | 0.88 | 0.53 | 0.92 | 0.92 |
| Growth Factor | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 100% | 116% | 116% | 116% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2140 | 607 | 0 | 2606 | 0 | 284 | 1255 | 208 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2201 | 546 | 0 | 2606 | 0 | 0 | 1539 | 208 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.03 | 1.03 | 1.03 | 1.00 | 1.00 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Number of Detectors | | 2 | 1 | | 2 | | 1 | 1 | 1 | | |
| Detector Template | | Thru | Right | | Thru | | Left | Left | Right | | |
| Leading Detector (m) | | 10.0 | 2.0 | | 10.0 | | 2.0 | 2.0 | 2.0 | | |
| Trailing Detector (m) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Position(m) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Size(m) | | 0.6 | 2.0 | | 0.6 | | 2.0 | 2.0 | 2.0 | | |
| Detector 1 Type | | Cl+Ex | Cl+Ex | | Cl+Ex | | Cl+Ex | Cl+Ex | Cl+Ex | | |
| Detector 1 Channel | | | | | | | | | | | |
| Detector 1 Extend (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Queue (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 1 Delay (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Detector 2 Position(m) | | 9.4 | | | 9.4 | | | | | | |
| Detector 2 Size(m) | | 0.6 | | | 0.6 | | | | | | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | | | | |
| Detector 2 Channel | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | | | | |
| Turn Type | | NA | Perm | | NA | | Perm | NA | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Detector Phase | | 4 | 4 | | 8 | | 6 | 6 | 6 | | |
| Switch Phase | | | | | | | | | | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

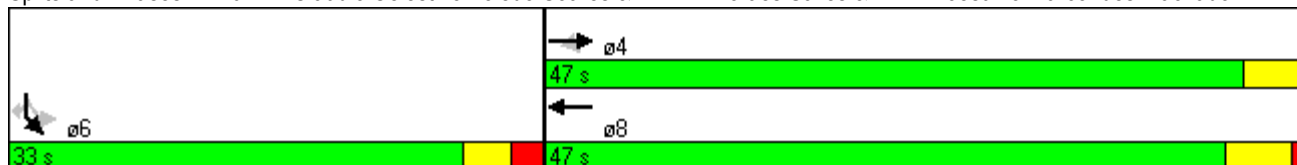


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|-------------------------|------|-------|-------|------|-------|------|-------|-------|-------|------|------|
| Minimum Initial (s) | | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | 4.0 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | 0.0 | 47.0 | 47.0 | 0.0 | 47.0 | 0.0 | 33.0 | 33.0 | 33.0 | 0.0 | 0.0 |
| Total Split (%) | 0.0% | 58.8% | 58.8% | 0.0% | 58.8% | 0.0% | 41.3% | 41.3% | 41.3% | 0.0% | 0.0% |
| Maximum Green (s) | | 43.0 | 43.0 | | 42.0 | | 28.0 | 28.0 | 28.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | | |
| Recall Mode | | C-Max | C-Max | | C-Max | | None | None | None | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 43.0 | 43.0 | | 42.0 | | 28.0 | 28.0 | 28.0 | | |
| Actuated g/C Ratio | | 0.54 | 0.54 | | 0.52 | | 0.35 | 0.35 | 0.35 | | |
| v/c Ratio | | 1.26 | 0.73 | | 1.03 | | 1.29 | 0.38 | 0.38 | | |
| Control Delay | | 144.2 | 21.1 | | 31.9 | | 164.9 | 22.1 | 22.1 | | |
| Queue Delay | | 84.6 | 0.0 | | 82.3 | | 8.4 | 0.0 | 0.0 | | |
| Total Delay | | 228.8 | 21.1 | | 114.2 | | 173.2 | 22.1 | 22.1 | | |
| LOS | | F | C | | F | | F | C | C | | |
| Approach Delay | | 187.5 | | | 114.2 | | 155.3 | | | | |
| Approach LOS | | F | | | F | | F | | | | |

Intersection Summary

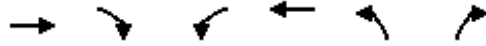
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 25 (31%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 140 |
| Control Type: | Actuated-Coordinated |
| Maximum v/c Ratio: | 1.29 |
| Intersection Signal Delay: | 152.7 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 174.5% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings
71: Av. Guarani & Av. Dr. Moraes Salles

06/05/2016



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Volume (vph) | 2427 | 269 | 0 | 2325 | 0 | 352 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 14% | | | 14% | 14% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.980 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4635 | 0 | 0 | 4638 | 0 | 1574 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4635 | 0 | 0 | 4638 | 0 | 1574 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 52.8 | | | 49.8 | 78.3 | |
| Travel Time (s) | 3.8 | | | 3.6 | 5.6 | |
| Peak Hour Factor | 0.93 | 0.69 | 0.92 | 0.85 | 0.92 | 0.88 |
| Growth Factor | 100% | 100% | 116% | 100% | 116% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 2610 | 390 | 0 | 2735 | 0 | 400 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 3000 | 0 | 0 | 2735 | 0 | 400 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | R NA |
| Median Width(m) | 4.8 | | | 4.8 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.10 | 1.10 | 1.10 | 1.10 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 81.3% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1329 | 1386 | 2715 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.49 |
| Stops (#) | 1329 | 0 | 1329 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 5 | 3 | 8 |
| Distance Traveled (km) | 244 | 151 | 395 |
| Fuel Consumed (l) | 53 | 14 | 67 |
| Fuel Economy (km/l) | 4.6 | 10.5 | 5.9 |
| CO Emissions (kg) | 0.99 | 0.27 | 1.25 |
| NOx Emissions (kg) | 0.19 | 0.05 | 0.24 |
| VOC Emissions (kg) | 0.23 | 0.06 | 0.29 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 1066 | 891 | 147 | 359 | 2463 |
| Control Delay / Veh (s/v) | 105 | 108 | 53 | 94 | 101 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 105 | 108 | 53 | 94 | 101 |
| Total Delay (hr) | 31 | 27 | 2 | 9 | 69 |
| Stops / Veh | 0.87 | 0.87 | 0.86 | 0.89 | 0.87 |
| Stops (#) | 928 | 776 | 127 | 319 | 2150 |
| Average Speed (km/hr) | 6 | 10 | 6 | 3 | 7 |
| Total Travel Time (hr) | 35 | 33 | 2 | 10 | 81 |
| Distance Traveled (km) | 196 | 329 | 14 | 35 | 574 |
| Fuel Consumed (l) | 126 | 122 | 10 | 36 | 295 |
| Fuel Economy (km/l) | 1.6 | 2.7 | 1.4 | 1.0 | 1.9 |
| CO Emissions (kg) | 2.34 | 2.28 | 0.19 | 0.68 | 5.49 |
| NOx Emissions (kg) | 0.45 | 0.44 | 0.04 | 0.13 | 1.06 |
| VOC Emissions (kg) | 0.54 | 0.53 | 0.04 | 0.16 | 1.27 |
| Unserviced Vehicles (#) | 103 | 89 | 0 | 11 | 203 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

3: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 2627 | 2627 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 15 | 15 |
| Distance Traveled (km) | 744 | 744 |
| Fuel Consumed (l) | 71 | 71 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 1.32 | 1.32 |
| NOx Emissions (kg) | 0.25 | 0.25 |
| VOC Emissions (kg) | 0.30 | 0.30 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 545 | 2944 | 3489 |
| Control Delay / Veh (s/v) | 92 | 7 | 20 |
| Queue Delay / Veh (s/v) | 0 | 84 | 71 |
| Total Delay / Veh (s/v) | 92 | 91 | 91 |
| Total Delay (hr) | 14 | 75 | 88 |
| Stops / Veh | 0.91 | 0.47 | 0.54 |
| Stops (#) | 496 | 1372 | 1868 |
| Average Speed (km/hr) | 2 | 2 | 2 |
| Total Travel Time (hr) | 15 | 77 | 92 |
| Distance Traveled (km) | 33 | 133 | 166 |
| Fuel Consumed (l) | 53 | 250 | 302 |
| Fuel Economy (km/l) | 0.6 | 0.5 | 0.5 |
| CO Emissions (kg) | 0.98 | 4.65 | 5.62 |
| NOx Emissions (kg) | 0.19 | 0.90 | 1.09 |
| VOC Emissions (kg) | 0.23 | 1.07 | 1.30 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | SB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 501 | 4024 | 4525 |
| Control Delay / Veh (s/v) | 155 | 83 | 91 |
| Queue Delay / Veh (s/v) | 75 | 77 | 76 |
| Total Delay / Veh (s/v) | 229 | 160 | 167 |
| Total Delay (hr) | 32 | 178 | 210 |
| Stops / Veh | 0.84 | 0.87 | 0.86 |
| Stops (#) | 419 | 3491 | 3910 |
| Average Speed (km/hr) | 1 | 1 | 1 |
| Total Travel Time (hr) | 33 | 184 | 217 |
| Distance Traveled (km) | 36 | 275 | 311 |
| Fuel Consumed (l) | 101 | 599 | 700 |
| Fuel Economy (km/l) | 0.4 | 0.5 | 0.4 |
| CO Emissions (kg) | 1.88 | 11.14 | 13.02 |
| NOx Emissions (kg) | 0.36 | 2.15 | 2.51 |
| VOC Emissions (kg) | 0.43 | 2.57 | 3.00 |
| Unserviced Vehicles (#) | 75 | 501 | 576 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

| Direction | EB | SB | NW | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 351 | 2484 | 662 | 3497 |
| Control Delay / Veh (s/v) | 0 | 20 | 35 | 21 |
| Queue Delay / Veh (s/v) | 0 | 2 | 0 | 1 |
| Total Delay / Veh (s/v) | 1 | 22 | 35 | 22 |
| Total Delay (hr) | 0 | 15 | 6 | 22 |
| Stops / Veh | 0.00 | 0.69 | 0.86 | 0.66 |
| Stops (#) | 0 | 1723 | 569 | 2292 |
| Average Speed (km/hr) | 41 | 15 | 3 | 13 |
| Total Travel Time (hr) | 0 | 22 | 7 | 29 |
| Distance Traveled (km) | 13 | 330 | 21 | 363 |
| Fuel Consumed (l) | 1 | 112 | 32 | 145 |
| Fuel Economy (km/l) | 9.3 | 3.0 | 0.6 | 2.5 |
| CO Emissions (kg) | 0.03 | 2.08 | 0.60 | 2.71 |
| NOx Emissions (kg) | 0.00 | 0.40 | 0.12 | 0.52 |
| VOC Emissions (kg) | 0.01 | 0.48 | 0.14 | 0.62 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

7: Av. Princesa D'Oeste

| Direction | EB | NW | All |
|------------------------------|-------|-------|-------|
| Volume (vph) | 1931 | 2342 | 4273 |
| Control Delay / Veh (s/v) | 351 | 388 | 371 |
| Queue Delay / Veh (s/v) | 0 | 19 | 10 |
| Total Delay / Veh (s/v) | 351 | 407 | 382 |
| Total Delay (hr) | 188 | 265 | 453 |
| Stops / Veh | 0.67 | 0.37 | 0.51 |
| Stops (#) | 1288 | 878 | 2166 |
| Average Speed (km/hr) | 0 | 4 | 2 |
| Total Travel Time (hr) | 189 | 286 | 475 |
| Distance Traveled (km) | 46 | 1049 | 1095 |
| Fuel Consumed (l) | 555 | 852 | 1407 |
| Fuel Economy (km/l) | 0.1 | 1.2 | 0.8 |
| CO Emissions (kg) | 10.32 | 15.86 | 26.17 |
| NOx Emissions (kg) | 1.99 | 3.06 | 5.05 |
| VOC Emissions (kg) | 2.38 | 3.66 | 6.04 |
| Unserviced Vehicles (#) | 798 | 1050 | 1848 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

8: Av. Ayrton Senna da Silva

| Direction | EB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1046 | 1080 | 2126 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 2 | 3 |
| Distance Traveled (km) | 95 | 77 | 173 |
| Fuel Consumed (l) | 9 | 7 | 16 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.17 | 0.14 | 0.30 |
| NOx Emissions (kg) | 0.03 | 0.03 | 0.06 |
| VOC Emissions (kg) | 0.04 | 0.03 | 0.07 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

| Direction | EB | WB | NB | SB | All |
|------------------------------|------|------|------|------|------|
| Volume (vph) | 709 | 550 | 395 | 892 | 2546 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Stops (#) | 709 | 550 | 395 | 892 | 2546 |
| Average Speed (km/hr) | 50 | 50 | 50 | 50 | 50 |
| Total Travel Time (hr) | 5 | 1 | 1 | 2 | 9 |
| Distance Traveled (km) | 261 | 67 | 48 | 96 | 472 |
| Fuel Consumed (l) | 41 | 19 | 13 | 29 | 102 |
| Fuel Economy (km/l) | 6.4 | 3.6 | 3.6 | 3.3 | 4.6 |
| CO Emissions (kg) | 0.76 | 0.35 | 0.25 | 0.54 | 1.90 |
| NOx Emissions (kg) | 0.15 | 0.07 | 0.05 | 0.10 | 0.37 |
| VOC Emissions (kg) | 0.17 | 0.08 | 0.06 | 0.12 | 0.44 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 | 0 |

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

| Direction | NB | SE | All |
|------------------------------|------|------|------|
| Volume (vph) | 751 | 1620 | 2371 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.32 |
| Stops (#) | 751 | 0 | 751 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 2 | 1 | 3 |
| Distance Traveled (km) | 100 | 65 | 165 |
| Fuel Consumed (l) | 26 | 6 | 33 |
| Fuel Economy (km/l) | 3.8 | 10.5 | 5.1 |
| CO Emissions (kg) | 0.49 | 0.12 | 0.61 |
| NOx Emissions (kg) | 0.09 | 0.02 | 0.12 |
| VOC Emissions (kg) | 0.11 | 0.03 | 0.14 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad

| Direction | WB | SB | NE | All |
|------------------------------|------|-------|-------|-------|
| Volume (vph) | 392 | 3438 | 1323 | 5153 |
| Control Delay / Veh (s/v) | 86 | 88 | 124 | 97 |
| Queue Delay / Veh (s/v) | 674 | 76 | 601 | 256 |
| Total Delay / Veh (s/v) | 761 | 164 | 725 | 353 |
| Total Delay (hr) | 83 | 156 | 266 | 505 |
| Stops / Veh | 1.00 | 0.85 | 0.86 | 0.86 |
| Stops (#) | 392 | 2924 | 1139 | 4455 |
| Average Speed (km/hr) | 0 | 4 | 0 | 2 |
| Total Travel Time (hr) | 83 | 170 | 268 | 521 |
| Distance Traveled (km) | 13 | 703 | 83 | 799 |
| Fuel Consumed (l) | 239 | 565 | 771 | 1576 |
| Fuel Economy (km/l) | 0.1 | 1.2 | 0.1 | 0.5 |
| CO Emissions (kg) | 4.45 | 10.51 | 14.35 | 29.31 |
| NOx Emissions (kg) | 0.86 | 2.03 | 2.77 | 5.66 |
| VOC Emissions (kg) | 1.03 | 2.42 | 3.31 | 6.76 |
| Unserviced Vehicles (#) | 0 | 397 | 180 | 578 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1492 | 1492 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 51 | 51 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 48 | 48 |
| Fuel Consumed (l) | 5 | 5 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.09 | 0.09 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

23: Rua Proença

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 437 | 437 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 42 | 42 |
| Fuel Consumed (l) | 4 | 4 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.07 | 0.07 |
| NOx Emissions (kg) | 0.01 | 0.01 |
| VOC Emissions (kg) | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

24: Rua Barão de Paranapanema

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 670 | 86 | 756 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 0 | 0 | 0 |
| Distance Traveled (km) | 22 | 2 | 24 |
| Fuel Consumed (l) | 2 | 0 | 2 |
| Fuel Economy (km/l) | 10.5 | NA | 10.5 |
| CO Emissions (kg) | 0.04 | 0.00 | 0.04 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

25: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 1517 | 1432 | 2949 |
| Control Delay / Veh (s/v) | 76 | 58 | 67 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 76 | 58 | 67 |
| Total Delay (hr) | 32 | 23 | 55 |
| Stops / Veh | 0.84 | 0.87 | 0.86 |
| Stops (#) | 1272 | 1250 | 2522 |
| Average Speed (km/hr) | 1 | 2 | 2 |
| Total Travel Time (hr) | 33 | 24 | 57 |
| Distance Traveled (km) | 48 | 39 | 87 |
| Fuel Consumed (l) | 122 | 96 | 217 |
| Fuel Economy (km/l) | 0.4 | 0.4 | 0.4 |
| CO Emissions (kg) | 2.26 | 1.78 | 4.04 |
| NOx Emissions (kg) | 0.44 | 0.34 | 0.78 |
| VOC Emissions (kg) | 0.52 | 0.41 | 0.93 |
| Unserved Vehicles (#) | 138 | 41 | 179 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

26: Rua Conde D'Eu & Av. Princesa D'Oeste

| Direction | WB | NB | All |
|------------------------------|------|------|-------|
| Volume (vph) | 2129 | 2064 | 4193 |
| Control Delay / Veh (s/v) | 73 | 79 | 76 |
| Queue Delay / Veh (s/v) | 216 | 17 | 118 |
| Total Delay / Veh (s/v) | 289 | 96 | 194 |
| Total Delay (hr) | 171 | 55 | 226 |
| Stops / Veh | 0.88 | 0.90 | 0.89 |
| Stops (#) | 1871 | 1865 | 3736 |
| Average Speed (km/hr) | 1 | 2 | 2 |
| Total Travel Time (hr) | 176 | 58 | 233 |
| Distance Traveled (km) | 230 | 142 | 372 |
| Fuel Consumed (l) | 537 | 208 | 745 |
| Fuel Economy (km/l) | 0.4 | 0.7 | 0.5 |
| CO Emissions (kg) | 9.99 | 3.87 | 13.86 |
| NOx Emissions (kg) | 1.93 | 0.75 | 2.68 |
| VOC Emissions (kg) | 2.31 | 0.89 | 3.20 |
| Unserved Vehicles (#) | 69 | 150 | 219 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

28: Av. Princesa D'Oeste

| Direction | SB | All |
|------------------------------|------|------|
| Volume (vph) | 4558 | 4558 |
| Control Delay / Veh (s/v) | 1 | 1 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 1 | 1 |
| Total Delay (hr) | 1 | 1 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 2 | 2 |
| Average Speed (km/hr) | 45 | 45 |
| Total Travel Time (hr) | 8 | 8 |
| Distance Traveled (km) | 375 | 375 |
| Fuel Consumed (l) | 38 | 38 |
| Fuel Economy (km/l) | 9.8 | 9.8 |
| CO Emissions (kg) | 0.71 | 0.71 |
| NOx Emissions (kg) | 0.14 | 0.14 |
| VOC Emissions (kg) | 0.16 | 0.16 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

| Direction | EB | WB | NW | All |
|------------------------------|------|------|------|-------|
| Volume (vph) | 2163 | 1938 | 1225 | 5326 |
| Control Delay / Veh (s/v) | 36 | 25 | 59 | 37 |
| Queue Delay / Veh (s/v) | 143 | 1 | 185 | 101 |
| Total Delay / Veh (s/v) | 179 | 25 | 244 | 138 |
| Total Delay (hr) | 108 | 13 | 83 | 204 |
| Stops / Veh | 0.59 | 0.83 | 0.83 | 0.74 |
| Stops (#) | 1284 | 1612 | 1021 | 3917 |
| Average Speed (km/hr) | 1 | 18 | 1 | 3 |
| Total Travel Time (hr) | 110 | 21 | 84 | 215 |
| Distance Traveled (km) | 127 | 383 | 51 | 561 |
| Fuel Consumed (l) | 339 | 110 | 257 | 706 |
| Fuel Economy (km/l) | 0.4 | 3.5 | 0.2 | 0.8 |
| CO Emissions (kg) | 6.30 | 2.04 | 4.79 | 13.13 |
| NOx Emissions (kg) | 1.22 | 0.39 | 0.92 | 2.53 |
| VOC Emissions (kg) | 1.45 | 0.47 | 1.10 | 3.03 |
| Unserviced Vehicles (#) | 111 | 0 | 52 | 163 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

| Direction | EB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1100 | 464 | 1564 |
| Control Delay / Veh (s/v) | 8 | 34 | 16 |
| Queue Delay / Veh (s/v) | 0 | 5 | 2 |
| Total Delay / Veh (s/v) | 8 | 39 | 17 |
| Total Delay (hr) | 2 | 5 | 7 |
| Stops / Veh | 0.43 | 0.88 | 0.56 |
| Stops (#) | 473 | 409 | 882 |
| Average Speed (km/hr) | 9 | 6 | 7 |
| Total Travel Time (hr) | 3 | 6 | 9 |
| Distance Traveled (km) | 28 | 37 | 65 |
| Fuel Consumed (l) | 20 | 27 | 47 |
| Fuel Economy (km/l) | 1.4 | 1.4 | 1.4 |
| CO Emissions (kg) | 0.37 | 0.49 | 0.87 |
| NOx Emissions (kg) | 0.07 | 0.10 | 0.17 |
| VOC Emissions (kg) | 0.09 | 0.11 | 0.20 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

37: Av. Dr. Jesuino Marcondes Machado

| Direction | SB | NW | All |
|------------------------------|------|------|------|
| Volume (vph) | 1430 | 597 | 2027 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 | 0.00 |
| Stops (#) | 0 | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 6 | 1 | 7 |
| Distance Traveled (km) | 304 | 35 | 339 |
| Fuel Consumed (l) | 29 | 3 | 32 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 10.5 |
| CO Emissions (kg) | 0.54 | 0.06 | 0.60 |
| NOx Emissions (kg) | 0.10 | 0.01 | 0.12 |
| VOC Emissions (kg) | 0.12 | 0.01 | 0.14 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | NB | All |
|------------------------------|-------|-------|
| Volume (vph) | 4274 | 4274 |
| Control Delay / Veh (s/v) | 20 | 20 |
| Queue Delay / Veh (s/v) | 155 | 155 |
| Total Delay / Veh (s/v) | 175 | 175 |
| Total Delay (hr) | 207 | 207 |
| Stops / Veh | 0.68 | 0.68 |
| Stops (#) | 2889 | 2889 |
| Average Speed (km/hr) | 1 | 1 |
| Total Travel Time (hr) | 213 | 213 |
| Distance Traveled (km) | 286 | 286 |
| Fuel Consumed (l) | 666 | 666 |
| Fuel Economy (km/l) | 0.4 | 0.4 |
| CO Emissions (kg) | 12.39 | 12.39 |
| NOx Emissions (kg) | 2.39 | 2.39 |
| VOC Emissions (kg) | 2.86 | 2.86 |
| Unserviced Vehicles (#) | 112 | 112 |
| Vehicles in dilemma zone (#) | 0 | 0 |

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

| Direction | WB | NB | All |
|------------------------------|------|------|-------|
| Volume (vph) | 694 | 2801 | 3495 |
| Control Delay / Veh (s/v) | 70 | 20 | 30 |
| Queue Delay / Veh (s/v) | 671 | 158 | 260 |
| Total Delay / Veh (s/v) | 741 | 178 | 290 |
| Total Delay (hr) | 143 | 139 | 281 |
| Stops / Veh | 0.93 | 0.79 | 0.82 |
| Stops (#) | 642 | 2218 | 2860 |
| Average Speed (km/hr) | 0 | 1 | 1 |
| Total Travel Time (hr) | 144 | 142 | 286 |
| Distance Traveled (km) | 49 | 177 | 226 |
| Fuel Consumed (l) | 415 | 450 | 865 |
| Fuel Economy (km/l) | 0.1 | 0.4 | 0.3 |
| CO Emissions (kg) | 7.71 | 8.38 | 16.09 |
| NOx Emissions (kg) | 1.49 | 1.62 | 3.10 |
| VOC Emissions (kg) | 1.78 | 1.93 | 3.71 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| Direction | EB | NE | All |
|------------------------------|------|------|------|
| Volume (vph) | 716 | 2986 | 3702 |
| Control Delay / Veh (s/v) | 61 | 22 | 29 |
| Queue Delay / Veh (s/v) | 206 | 3 | 42 |
| Total Delay / Veh (s/v) | 267 | 25 | 71 |
| Total Delay (hr) | 53 | 20 | 73 |
| Stops / Veh | 0.92 | 0.69 | 0.73 |
| Stops (#) | 660 | 2060 | 2720 |
| Average Speed (km/hr) | 0 | 20 | 8 |
| Total Travel Time (hr) | 54 | 34 | 87 |
| Distance Traveled (km) | 24 | 675 | 699 |
| Fuel Consumed (l) | 164 | 167 | 331 |
| Fuel Economy (km/l) | 0.1 | 4.0 | 2.1 |
| CO Emissions (kg) | 3.05 | 3.11 | 6.16 |
| NOx Emissions (kg) | 0.59 | 0.60 | 1.19 |
| VOC Emissions (kg) | 0.70 | 0.72 | 1.42 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales

| Direction | EB | All |
|------------------------------|------|------|
| Volume (vph) | 1606 | 1606 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 1 | 1 |
| Distance Traveled (km) | 64 | 64 |
| Fuel Consumed (l) | 6 | 6 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.11 | 0.11 |
| NOx Emissions (kg) | 0.02 | 0.02 |
| VOC Emissions (kg) | 0.03 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Coutinho

| Direction | WB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 80 | 773 | 853 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.09 |
| Stops (#) | 80 | 0 | 80 |
| Average Speed (km/hr) | 50 | 51 | 51 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 4 | 26 | 31 |
| Fuel Consumed (l) | 2 | 2 | 5 |
| Fuel Economy (km/l) | 2.0 | 10.5 | 6.5 |
| CO Emissions (kg) | 0.04 | 0.05 | 0.09 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.02 |
| VOC Emissions (kg) | 0.01 | 0.01 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

53: Av. Dr. Moraes Salles & Retorno

| Direction | EB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 708 | 8 | 716 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.01 |
| Stops (#) | 0 | 8 | 8 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 29 | 0 | 29 |
| Fuel Consumed (l) | 3 | 0 | 3 |
| Fuel Economy (km/l) | 10.5 | NA | 9.9 |
| CO Emissions (kg) | 0.05 | 0.00 | 0.05 |
| NOx Emissions (kg) | 0.01 | 0.00 | 0.01 |
| VOC Emissions (kg) | 0.01 | 0.00 | 0.01 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales

| Direction | EB | SB | All |
|------------------------------|------|-------|-------|
| Volume (vph) | 1558 | 3749 | 5307 |
| Control Delay / Veh (s/v) | 220 | 224 | 223 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 220 | 224 | 223 |
| Total Delay (hr) | 95 | 233 | 328 |
| Stops / Veh | 0.76 | 0.67 | 0.69 |
| Stops (#) | 1178 | 2509 | 3687 |
| Average Speed (km/hr) | 1 | 1 | 1 |
| Total Travel Time (hr) | 97 | 237 | 334 |
| Distance Traveled (km) | 63 | 220 | 283 |
| Fuel Consumed (l) | 297 | 723 | 1019 |
| Fuel Economy (km/l) | 0.2 | 0.3 | 0.3 |
| CO Emissions (kg) | 5.52 | 13.44 | 18.96 |
| NOx Emissions (kg) | 1.06 | 2.59 | 3.66 |
| VOC Emissions (kg) | 1.27 | 3.10 | 4.37 |
| Unserviced Vehicles (#) | 445 | 1163 | 1608 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

56: Rua Barão de Paranapanema & Acesso

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 47 | 750 | 797 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.94 |
| Stops (#) | 0 | 750 | 750 |
| Average Speed (km/hr) | 50 | 49 | 49 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 26 | 28 |
| Fuel Consumed (l) | 0 | 19 | 19 |
| Fuel Economy (km/l) | NA | 1.3 | 1.4 |
| CO Emissions (kg) | 0.00 | 0.36 | 0.36 |
| NOx Emissions (kg) | 0.00 | 0.07 | 0.07 |
| VOC Emissions (kg) | 0.00 | 0.08 | 0.08 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

59: Av. Princesa D'Oeste & retorno

| Direction | NB | All |
|------------------------------|------|------|
| Volume (vph) | 1492 | 1492 |
| Control Delay / Veh (s/v) | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 |
| Total Delay (hr) | 0 | 0 |
| Stops / Veh | 0.00 | 0.00 |
| Stops (#) | 0 | 0 |
| Average Speed (km/hr) | 50 | 50 |
| Total Travel Time (hr) | 5 | 5 |
| Distance Traveled (km) | 271 | 271 |
| Fuel Consumed (l) | 26 | 26 |
| Fuel Economy (km/l) | 10.5 | 10.5 |
| CO Emissions (kg) | 0.48 | 0.48 |
| NOx Emissions (kg) | 0.09 | 0.09 |
| VOC Emissions (kg) | 0.11 | 0.11 |
| Unserviced Vehicles (#) | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 |

61: Av. Princesa D'Oeste & retorno

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 60 | 1971 | 2031 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 1.00 | 0.00 | 0.03 |
| Stops (#) | 60 | 0 | 60 |
| Average Speed (km/hr) | 49 | 50 | 49 |
| Total Travel Time (hr) | 0 | 1 | 1 |
| Distance Traveled (km) | 2 | 43 | 45 |
| Fuel Consumed (l) | 2 | 4 | 6 |
| Fuel Economy (km/l) | 1.3 | 10.5 | 8.0 |
| CO Emissions (kg) | 0.03 | 0.08 | 0.11 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.02 |
| VOC Emissions (kg) | 0.01 | 0.02 | 0.02 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

| Direction | EB | NB | All |
|------------------------------|------|------|------|
| Volume (vph) | 501 | 1563 | 2064 |
| Control Delay / Veh (s/v) | 8 | 9 | 9 |
| Queue Delay / Veh (s/v) | 675 | 41 | 195 |
| Total Delay / Veh (s/v) | 683 | 51 | 204 |
| Total Delay (hr) | 95 | 22 | 117 |
| Stops / Veh | 0.18 | 0.40 | 0.34 |
| Stops (#) | 92 | 618 | 710 |
| Average Speed (km/hr) | 0 | 4 | 1 |
| Total Travel Time (hr) | 95 | 24 | 120 |
| Distance Traveled (km) | 18 | 106 | 124 |
| Fuel Consumed (l) | 267 | 85 | 352 |
| Fuel Economy (km/l) | 0.1 | 1.2 | 0.4 |
| CO Emissions (kg) | 4.97 | 1.58 | 6.55 |
| NOx Emissions (kg) | 0.96 | 0.30 | 1.26 |
| VOC Emissions (kg) | 1.15 | 0.36 | 1.51 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

63: Av. Princesa D'Oeste & Rua Conde D'Eu

| Direction | SB | SW | All |
|------------------------------|------|------|------|
| Volume (vph) | 2827 | 1197 | 4024 |
| Control Delay / Veh (s/v) | 69 | 81 | 73 |
| Queue Delay / Veh (s/v) | 7 | 172 | 56 |
| Total Delay / Veh (s/v) | 77 | 253 | 129 |
| Total Delay (hr) | 60 | 84 | 144 |
| Stops / Veh | 0.84 | 0.86 | 0.84 |
| Stops (#) | 2362 | 1034 | 3396 |
| Average Speed (km/hr) | 2 | 0 | 1 |
| Total Travel Time (hr) | 62 | 85 | 147 |
| Distance Traveled (km) | 113 | 38 | 150 |
| Fuel Consumed (l) | 230 | 260 | 490 |
| Fuel Economy (km/l) | 0.5 | 0.1 | 0.3 |
| CO Emissions (kg) | 4.28 | 4.84 | 9.12 |
| NOx Emissions (kg) | 0.83 | 0.93 | 1.76 |
| VOC Emissions (kg) | 0.99 | 1.12 | 2.10 |
| Unserviced Vehicles (#) | 265 | 136 | 401 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

| Direction | WB | SB | All |
|------------------------------|------|------|------|
| Volume (vph) | 576 | 126 | 702 |
| Control Delay / Veh (s/v) | 0 | 0 | 0 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 0 |
| Total Delay (hr) | 0 | 0 | 0 |
| Stops / Veh | 0.00 | 1.00 | 0.18 |
| Stops (#) | 0 | 126 | 126 |
| Average Speed (km/hr) | 50 | 50 | 50 |
| Total Travel Time (hr) | 1 | 0 | 1 |
| Distance Traveled (km) | 35 | 11 | 46 |
| Fuel Consumed (l) | 3 | 4 | 7 |
| Fuel Economy (km/l) | 10.5 | 2.9 | 6.4 |
| CO Emissions (kg) | 0.06 | 0.07 | 0.13 |
| NOx Emissions (kg) | 0.01 | 0.01 | 0.03 |
| VOC Emissions (kg) | 0.01 | 0.02 | 0.03 |
| Unserviced Vehicles (#) | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

66: Av. José de Souza Campos

| Direction | NB | NW | All |
|------------------------------|-------|------|-------|
| Volume (vph) | 1323 | 3101 | 4424 |
| Control Delay / Veh (s/v) | 163 | 183 | 177 |
| Queue Delay / Veh (s/v) | 551 | 0 | 165 |
| Total Delay / Veh (s/v) | 714 | 183 | 342 |
| Total Delay (hr) | 262 | 157 | 420 |
| Stops / Veh | 0.83 | 0.74 | 0.76 |
| Stops (#) | 1092 | 2287 | 3379 |
| Average Speed (km/hr) | 0 | 1 | 0 |
| Total Travel Time (hr) | 264 | 160 | 423 |
| Distance Traveled (km) | 54 | 122 | 177 |
| Fuel Consumed (l) | 757 | 499 | 1256 |
| Fuel Economy (km/l) | 0.1 | 0.2 | 0.1 |
| CO Emissions (kg) | 14.08 | 9.28 | 23.36 |
| NOx Emissions (kg) | 2.72 | 1.79 | 4.51 |
| VOC Emissions (kg) | 3.25 | 2.14 | 5.39 |
| Unserviced Vehicles (#) | 282 | 816 | 1098 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 |

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

| Direction | EB | WB | SB | All |
|------------------------------|------|------|------|-------|
| Volume (vph) | 2463 | 2215 | 1430 | 6108 |
| Control Delay / Veh (s/v) | 121 | 32 | 154 | 96 |
| Queue Delay / Veh (s/v) | 69 | 82 | 8 | 59 |
| Total Delay / Veh (s/v) | 190 | 114 | 162 | 156 |
| Total Delay (hr) | 130 | 70 | 64 | 264 |
| Stops / Veh | 0.79 | 0.78 | 0.80 | 0.79 |
| Stops (#) | 1952 | 1733 | 1149 | 4834 |
| Average Speed (km/hr) | 3 | 2 | 1 | 3 |
| Total Travel Time (hr) | 139 | 73 | 66 | 278 |
| Distance Traveled (km) | 480 | 130 | 91 | 700 |
| Fuel Consumed (l) | 449 | 246 | 212 | 907 |
| Fuel Economy (km/l) | 1.1 | 0.5 | 0.4 | 0.8 |
| CO Emissions (kg) | 8.35 | 4.57 | 3.95 | 16.87 |
| NOx Emissions (kg) | 1.61 | 0.88 | 0.76 | 3.26 |
| VOC Emissions (kg) | 1.93 | 1.05 | 0.91 | 3.89 |
| Unserviced Vehicles (#) | 415 | 56 | 300 | 771 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

71: Av. Guarani & Av. Dr. Moraes Salles

| Direction | EB | WB | NB | All |
|------------------------------|------|------|------|------|
| Volume (vph) | 2696 | 2325 | 352 | 5373 |
| Control Delay / Veh (s/v) | 0 | 0 | 425 | 28 |
| Queue Delay / Veh (s/v) | 0 | 0 | 0 | 0 |
| Total Delay / Veh (s/v) | 0 | 0 | 425 | 28 |
| Total Delay (hr) | 0 | 0 | 42 | 42 |
| Stops / Veh | 0.00 | 0.00 | 1.00 | 0.07 |
| Stops (#) | 0 | 0 | 352 | 352 |
| Average Speed (km/hr) | 50 | 50 | 1 | 12 |
| Total Travel Time (hr) | 3 | 9 | 42 | 54 |
| Distance Traveled (km) | 142 | 453 | 28 | 623 |
| Fuel Consumed (l) | 14 | 43 | 126 | 182 |
| Fuel Economy (km/l) | 10.5 | 10.5 | 0.2 | 3.4 |
| CO Emissions (kg) | 0.25 | 0.80 | 2.34 | 3.39 |
| NOx Emissions (kg) | 0.05 | 0.15 | 0.45 | 0.65 |
| VOC Emissions (kg) | 0.06 | 0.18 | 0.54 | 0.78 |
| Unserviced Vehicles (#) | 0 | 0 | 0 | 0 |
| Vehicles in dilemma zone (#) | 0 | 0 | 0 | 0 |

Network Totals

| | |
|------------------------------|--------|
| Number of Intersections | 36 |
| Control Delay / Veh (s/v) | 66 |
| Queue Delay / Veh (s/v) | 61 |
| Total Delay / Veh (s/v) | 126 |
| Total Delay (hr) | 3719 |
| Stops / Veh | 0.55 |
| Stops (#) | 58377 |
| Average Speed (km/hr) | 3 |
| Total Travel Time (hr) | 3938 |
| Distance Traveled (km) | 10955 |
| Fuel Consumed (l) | 12652 |
| Fuel Economy (km/l) | 0.9 |
| CO Emissions (kg) | 235.32 |
| NOx Emissions (kg) | 45.42 |
| VOC Emissions (kg) | 54.28 |
| Unserved Vehicles (#) | 7755 |
| Vehicles in dilemma zone (#) | 0 |
| Performance Index | 3881.1 |



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| PICO DA MANHÃ COM EMPREENDIMENTO | PICO DA MANHÃ COM EMPREENDIMENTO OTIMIZADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----|---------------------------|-----|-------------------------|----|-------------------------|-----|------------------|------|-------------|------|-----------|-------|-----------------------|---|------------------------|------|------------------------|-------|-------------------|-------|---------------------|-----|-------------------|--------|--------------------|-------|--------------------|-------|-------------------------|-------|------------------------------|---|-------------------|--------|--|-------------------------|----|---------------------------|----|-------------------------|----|-------------------------|-----|------------------|------|-------------|------|-----------|-------|-----------------------|---|------------------------|------|------------------------|-------|-------------------|-------|---------------------|-----|-------------------|--------|--------------------|-------|--------------------|-------|-------------------------|------|------------------------------|---|-------------------|--------|
| <p>Measures of Effectiveness</p> <hr/> <p>Network Totals</p> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e1ecf4;">Number of Intersections</td><td style="text-align: right;">36</td></tr> <tr><td>Control Delay / Veh (s/v)</td><td style="text-align: right;">81</td></tr> <tr><td>Queue Delay / Veh (s/v)</td><td style="text-align: right;">71</td></tr> <tr><td>Total Delay / Veh (s/v)</td><td style="text-align: right;">152</td></tr> <tr><td>Total Delay (hr)</td><td style="text-align: right;">3726</td></tr> <tr><td>Stops / Veh</td><td style="text-align: right;">0.56</td></tr> <tr><td>Stops (#)</td><td style="text-align: right;">49288</td></tr> <tr><td>Average Speed (km/hr)</td><td style="text-align: right;">2</td></tr> <tr><td>Total Travel Time (hr)</td><td style="text-align: right;">3913</td></tr> <tr><td>Distance Traveled (km)</td><td style="text-align: right;">9336</td></tr> <tr><td>Fuel Consumed (l)</td><td style="text-align: right;">12314</td></tr> <tr><td>Fuel Economy (km/l)</td><td style="text-align: right;">0.8</td></tr> <tr><td>CO Emissions (kg)</td><td style="text-align: right;">229.04</td></tr> <tr><td>NOx Emissions (kg)</td><td style="text-align: right;">44.21</td></tr> <tr><td>VOC Emissions (kg)</td><td style="text-align: right;">52.83</td></tr> <tr><td>Unserviced Vehicles (#)</td><td style="text-align: right;">6536</td></tr> <tr><td>Vehicles in dilemma zone (#)</td><td style="text-align: right;">0</td></tr> <tr><td>Performance Index</td><td style="text-align: right;">3862.9</td></tr> </table> | Number of Intersections | 36 | Control Delay / Veh (s/v) | 81 | Queue Delay / Veh (s/v) | 71 | Total Delay / Veh (s/v) | 152 | Total Delay (hr) | 3726 | Stops / Veh | 0.56 | Stops (#) | 49288 | Average Speed (km/hr) | 2 | Total Travel Time (hr) | 3913 | Distance Traveled (km) | 9336 | Fuel Consumed (l) | 12314 | Fuel Economy (km/l) | 0.8 | CO Emissions (kg) | 229.04 | NOx Emissions (kg) | 44.21 | VOC Emissions (kg) | 52.83 | Unserviced Vehicles (#) | 6536 | Vehicles in dilemma zone (#) | 0 | Performance Index | 3862.9 | <p>Measures of Effectiveness</p> <hr/> <p>Network Totals</p> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e1ecf4;">Number of Intersections</td><td style="text-align: right;">36</td></tr> <tr><td>Control Delay / Veh (s/v)</td><td style="text-align: right;">53</td></tr> <tr><td>Queue Delay / Veh (s/v)</td><td style="text-align: right;">32</td></tr> <tr><td>Total Delay / Veh (s/v)</td><td style="text-align: right;">85</td></tr> <tr><td>Total Delay (hr)</td><td style="text-align: right;">2091</td></tr> <tr><td>Stops / Veh</td><td style="text-align: right;">0.53</td></tr> <tr><td>Stops (#)</td><td style="text-align: right;">46445</td></tr> <tr><td>Average Speed (km/hr)</td><td style="text-align: right;">4</td></tr> <tr><td>Total Travel Time (hr)</td><td style="text-align: right;">2279</td></tr> <tr><td>Distance Traveled (km)</td><td style="text-align: right;">9368</td></tr> <tr><td>Fuel Consumed (l)</td><td style="text-align: right;">7725</td></tr> <tr><td>Fuel Economy (km/l)</td><td style="text-align: right;">1.2</td></tr> <tr><td>CO Emissions (kg)</td><td style="text-align: right;">143.68</td></tr> <tr><td>NOx Emissions (kg)</td><td style="text-align: right;">27.73</td></tr> <tr><td>VOC Emissions (kg)</td><td style="text-align: right;">33.14</td></tr> <tr><td>Unserviced Vehicles (#)</td><td style="text-align: right;">5236</td></tr> <tr><td>Vehicles in dilemma zone (#)</td><td style="text-align: right;">0</td></tr> <tr><td>Performance Index</td><td style="text-align: right;">2220.4</td></tr> </table> | Number of Intersections | 36 | Control Delay / Veh (s/v) | 53 | Queue Delay / Veh (s/v) | 32 | Total Delay / Veh (s/v) | 85 | Total Delay (hr) | 2091 | Stops / Veh | 0.53 | Stops (#) | 46445 | Average Speed (km/hr) | 4 | Total Travel Time (hr) | 2279 | Distance Traveled (km) | 9368 | Fuel Consumed (l) | 7725 | Fuel Economy (km/l) | 1.2 | CO Emissions (kg) | 143.68 | NOx Emissions (kg) | 27.73 | VOC Emissions (kg) | 33.14 | Unserviced Vehicles (#) | 5236 | Vehicles in dilemma zone (#) | 0 | Performance Index | 2220.4 |
| Number of Intersections | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Delay / Veh (s/v) | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Queue Delay / Veh (s/v) | 71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay / Veh (s/v) | 152 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay (hr) | 3726 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops / Veh | 0.56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops (#) | 49288 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average Speed (km/hr) | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Travel Time (hr) | 3913 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distance Traveled (km) | 9336 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Consumed (l) | 12314 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Economy (km/l) | 0.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO Emissions (kg) | 229.04 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOx Emissions (kg) | 44.21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOC Emissions (kg) | 52.83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unserviced Vehicles (#) | 6536 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicles in dilemma zone (#) | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance Index | 3862.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Intersections | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Delay / Veh (s/v) | 53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Queue Delay / Veh (s/v) | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay / Veh (s/v) | 85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay (hr) | 2091 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops / Veh | 0.53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops (#) | 46445 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average Speed (km/hr) | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Travel Time (hr) | 2279 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distance Traveled (km) | 9368 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Consumed (l) | 7725 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Economy (km/l) | 1.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO Emissions (kg) | 143.68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOx Emissions (kg) | 27.73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOC Emissions (kg) | 33.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unserviced Vehicles (#) | 5236 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicles in dilemma zone (#) | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance Index | 2220.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PICO DA TARDE COM EMPREENDIMENTO | PICO DA TARDE COM EMPREENDIMENTO OTIMIZADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Measures of Effectiveness</p> <hr/> <p>Network Totals</p> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e1ecf4;">Number of Intersections</td><td style="text-align: right;">36</td></tr> <tr><td>Control Delay / Veh (s/v)</td><td style="text-align: right;">123</td></tr> <tr><td>Queue Delay / Veh (s/v)</td><td style="text-align: right;">41</td></tr> <tr><td>Total Delay / Veh (s/v)</td><td style="text-align: right;">164</td></tr> <tr><td>Total Delay (hr)</td><td style="text-align: right;">4820</td></tr> <tr><td>Stops / Veh</td><td style="text-align: right;">0.56</td></tr> <tr><td>Stops (#)</td><td style="text-align: right;">58919</td></tr> <tr><td>Average Speed (km/hr)</td><td style="text-align: right;">2</td></tr> <tr><td>Total Travel Time (hr)</td><td style="text-align: right;">5040</td></tr> <tr><td>Distance Traveled (km)</td><td style="text-align: right;">10980</td></tr> <tr><td>Fuel Consumed (l)</td><td style="text-align: right;">15718</td></tr> <tr><td>Fuel Economy (km/l)</td><td style="text-align: right;">0.7</td></tr> <tr><td>CO Emissions (kg)</td><td style="text-align: right;">292.35</td></tr> <tr><td>NOx Emissions (kg)</td><td style="text-align: right;">56.43</td></tr> <tr><td>VOC Emissions (kg)</td><td style="text-align: right;">67.43</td></tr> <tr><td>Unserviced Vehicles (#)</td><td style="text-align: right;">12738</td></tr> <tr><td>Vehicles in dilemma zone (#)</td><td style="text-align: right;">0</td></tr> <tr><td>Performance Index</td><td style="text-align: right;">4984.0</td></tr> </table> | Number of Intersections | 36 | Control Delay / Veh (s/v) | 123 | Queue Delay / Veh (s/v) | 41 | Total Delay / Veh (s/v) | 164 | Total Delay (hr) | 4820 | Stops / Veh | 0.56 | Stops (#) | 58919 | Average Speed (km/hr) | 2 | Total Travel Time (hr) | 5040 | Distance Traveled (km) | 10980 | Fuel Consumed (l) | 15718 | Fuel Economy (km/l) | 0.7 | CO Emissions (kg) | 292.35 | NOx Emissions (kg) | 56.43 | VOC Emissions (kg) | 67.43 | Unserviced Vehicles (#) | 12738 | Vehicles in dilemma zone (#) | 0 | Performance Index | 4984.0 | <p>Measures of Effectiveness</p> <hr/> <p>Network Totals</p> <hr/> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e1ecf4;">Number of Intersections</td><td style="text-align: right;">36</td></tr> <tr><td>Control Delay / Veh (s/v)</td><td style="text-align: right;">66</td></tr> <tr><td>Queue Delay / Veh (s/v)</td><td style="text-align: right;">61</td></tr> <tr><td>Total Delay / Veh (s/v)</td><td style="text-align: right;">126</td></tr> <tr><td>Total Delay (hr)</td><td style="text-align: right;">3719</td></tr> <tr><td>Stops / Veh</td><td style="text-align: right;">0.55</td></tr> <tr><td>Stops (#)</td><td style="text-align: right;">58377</td></tr> <tr><td>Average Speed (km/hr)</td><td style="text-align: right;">3</td></tr> <tr><td>Total Travel Time (hr)</td><td style="text-align: right;">3938</td></tr> <tr><td>Distance Traveled (km)</td><td style="text-align: right;">10955</td></tr> <tr><td>Fuel Consumed (l)</td><td style="text-align: right;">12652</td></tr> <tr><td>Fuel Economy (km/l)</td><td style="text-align: right;">0.9</td></tr> <tr><td>CO Emissions (kg)</td><td style="text-align: right;">235.32</td></tr> <tr><td>NOx Emissions (kg)</td><td style="text-align: right;">45.42</td></tr> <tr><td>VOC Emissions (kg)</td><td style="text-align: right;">54.28</td></tr> <tr><td>Unserviced Vehicles (#)</td><td style="text-align: right;">7755</td></tr> <tr><td>Vehicles in dilemma zone (#)</td><td style="text-align: right;">0</td></tr> <tr><td>Performance Index</td><td style="text-align: right;">3881.1</td></tr> </table> | Number of Intersections | 36 | Control Delay / Veh (s/v) | 66 | Queue Delay / Veh (s/v) | 61 | Total Delay / Veh (s/v) | 126 | Total Delay (hr) | 3719 | Stops / Veh | 0.55 | Stops (#) | 58377 | Average Speed (km/hr) | 3 | Total Travel Time (hr) | 3938 | Distance Traveled (km) | 10955 | Fuel Consumed (l) | 12652 | Fuel Economy (km/l) | 0.9 | CO Emissions (kg) | 235.32 | NOx Emissions (kg) | 45.42 | VOC Emissions (kg) | 54.28 | Unserviced Vehicles (#) | 7755 | Vehicles in dilemma zone (#) | 0 | Performance Index | 3881.1 |
| Number of Intersections | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Delay / Veh (s/v) | 123 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Queue Delay / Veh (s/v) | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay / Veh (s/v) | 164 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay (hr) | 4820 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops / Veh | 0.56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops (#) | 58919 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average Speed (km/hr) | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Travel Time (hr) | 5040 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distance Traveled (km) | 10980 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Consumed (l) | 15718 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Economy (km/l) | 0.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO Emissions (kg) | 292.35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOx Emissions (kg) | 56.43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOC Emissions (kg) | 67.43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unserviced Vehicles (#) | 12738 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicles in dilemma zone (#) | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance Index | 4984.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Intersections | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Delay / Veh (s/v) | 66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Queue Delay / Veh (s/v) | 61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay / Veh (s/v) | 126 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Delay (hr) | 3719 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops / Veh | 0.55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stops (#) | 58377 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average Speed (km/hr) | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Travel Time (hr) | 3938 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Distance Traveled (km) | 10955 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Consumed (l) | 12652 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Economy (km/l) | 0.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO Emissions (kg) | 235.32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOx Emissions (kg) | 45.42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOC Emissions (kg) | 54.28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unserviced Vehicles (#) | 7755 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicles in dilemma zone (#) | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance Index | 3881.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Ofício PR nº 742/17
Campinas, 20 de junho de 2017

Ilmo. Sr.
Milton Lima
Gerente de Contas
MMG Consultoria e Assessoria Empresarial Ltda.
São Paulo - SP

Ref.: Protocolo EMDEC nº 2016/18/124

Assunto: Parecer Técnico para Construção de Empreendimento Residencial, Hoteleiro, Comercial e Serviços.

Prezado Senhor,

Em resposta ao protocolo em referência o qual solicita parecer técnico da EMDEC para construção de um empreendimento residencial, hoteleiro, comercial e de serviços, localizado na Avenida Imperatriz Dona Teresa Cristina, 11, lotes 025-UNI e 027-A-SUB, Quarteirão 01867, Zona 18, Jardim Paraíso, em Campinas, temos a esclarecer:

O projeto apresentado não possui condições técnicas de aprovação. Deverão ser providenciadas as seguintes alterações para adequá-lo à legislação vigente:

1. Não será permitido o acesso de veículos ao empreendimento pela Avenida Princesa d'Oeste, sendo somente permitida a saída de veículos do empreendimento para esta via;
2. Não será permitido o acesso de veículos ao empreendimento pela Rua Avelino Amaral, sendo somente permitida a saída de veículos do empreendimento para esta via;
3. Todos os acessos deverão se concentrar na nova Via Projetada pelo empreendedor que liga a Avenida Imperatriz Dona Teresa Cristina à Rua Avelino Amaral, a Avenida Guarani e a Avenida Imperatriz Dona Teresa Cristina;
4. Indicar e dimensionar nos acessos do empreendimento as respectivas faixas de desaceleração, com o mínimo de 3,00m de largura cada;

5. No cruzamento da nova Via Projetada pelo empreendedor com a Rua Avelino do Amaral, projetar e implantar um dispositivo viário que permita todos os desejos de circulação distribuindo os veículos de forma organizada com algumas restrições:
 - 5.1. A Rua Avelino do Amaral terá mão única em toda a extensão no sentido do acesso da Rua Uruguaiana para proporcionar retorno na Avenida Princesa d'Oeste e permitir a ligação com o Centro da cidade, e a partir do dispositivo viário, será possível também a ligação com a Avenida Imperatriz Dona Tereza Cristina pela nova Via Projetada pelo empreendedor.
6. Implantação de nova transposição do córrego da Avenida Princesa d'Oeste, próximo da Rua Avelino Amaral e continuação da Rua Uruguaiana;
7. Implantação de nova transposição do córrego da Avenida Princesa d'Oeste e continuação da Rua Proença;
8. Implantação de nova configuração geométrica na Avenida Ayrton Senna da Silva após o cruzamento da Avenida Monte Castelo e antes do cruzamento com a Rua Thomaz Ortale com dispositivo viário composto por faixa de desaceleração com 50,00m de comprimento por 3,50m de largura antes da alça existente que permite retorno nesta via dos veículos que trafegam no sentido da Avenida Princesa d'Oeste para a Rua Thomaz Ortale. Implantar, no sentido contrário, outro dispositivo viário composto por faixa de aceleração com 50,00m de comprimento por 3,50m de largura. Esses dispositivos viários, compostos por faixa de desaceleração e aceleração, deverão ser executados com guias, sarjetas, sinalização horizontal e vertical, sistema de drenagem, e pavimentação asfáltica, tipo IIIICA indicada pela Prefeitura Municipal de Campinas para veículos pesados (ônibus);
9. Implantação de transposição em desnível da Avenida Dr. Moraes Sales nas duas pistas (em ambos os sentidos) com início anterior e sob a Avenida Dr. Jesuino Marcondes Machado e prolongando-se até ultrapassar sob a Avenida Dr. Hermas Braga;
10. Implantar o prolongamento da Rua Geraldo de Castro Andrade até a Rua Afrânio Ferreira Junior com transposição de córrego para facilitar o acesso dos bairros das regiões leste e sudeste;
11. Implantar melhoria na transposição de córrego ligando a Rua Dr. Domingos Ademar Boldrini e Rua Salim Feres, prevendo alargamento e construção de calçada de pedestres em ambos os lados;

12. Nos itens de 05 a 11 deverão ser executados pavimentação, guias, sarjetas, sistema de drenagem, sinalização viária horizontal e vertical, calçada de pedestres e pavimentação asfáltica tipo IICA indicada pela Prefeitura Municipal de Campinas para veículos pesados (ônibus);
13. Implantar ciclovia ao longo do canteiro central da Avenida Princesa d'Oeste entre a Rua Uruguaiana e a Praça Agenor Oliveira (Cartola) no Jardim Proença;
14. Implantar o fechamento do canteiro central da Avenida Princesa d'Oeste com guias e sarjetas, no cruzamento existente que permite a ligação dos veículos que se deslocam da Rua Conde d'Eu para a Rua Barão de Paranapanema, e deverão ser completados com ajardinamento os espaços de viário atuais que serão integrados ao canteiro central. A ligação do viário da Rua Conde d'Eu com a pista da Avenida Princesa d'Oeste, no sentido Jardim Proença, permanecerá inalterada;
15. A conversão de retorno existente na Avenida Ayrton Senna da Silva próxima à Rua Antonio Francisco de Andrade deixará de existir, para tanto, deverão ser implantadas guias na continuidade da Avenida Ayrton Senna da Silva, nos dois sentidos desta via, para impedir o acesso de veículos a essa conversão, e deverão ser completados com ajardinamento os espaços de viário atuais que serão integrados ao canteiro central;
16. Modernização semafórica dos equipamentos do entorno:
Baseado no Estudo de Tráfego apresentado pelo empreendedor, a análise apresentada dos níveis de serviços e graus de saturação das aproximações nos pontos mais críticos das vias de acesso direto e indireto, encontra-se insatisfatória, tratando-se de um empreendimento de natureza Residencial, Comercial, Hoteleiro e de Serviços, onde é previsto o aumento de viagens nos períodos de picos e entre picos.

16.1. Face ao exposto, para minimizar os impactos que ocorrerão com o aumento das viagens geradas do empreendimento, sugerimos a modernização do controle e supervisão semafórica que permitirá a melhoria da eficiência e gestão do trânsito, com a *aquisição do Sistema Centralizado para o Gerenciamento do Tráfego Urbano em Tempo Real*, nos cruzamentos abaixo relacionados:
 - Avenida Dr. Moraes Salles (c/b) x Avenida José de Souza Campos;
 - Avenida Dr. Moraes Salles x Rua Gal. Marcondes Salgado;
 - Avenida Princesa d'Oeste x Avenida Ayrton Senna da Silva;
 - Avenida Princesa d'Oeste x Rua Conde d'Eu;
 - Avenida José de Souza Campos x Avenida Eng^o Carlos Stevenson (c/b);
 - Avenida José de Souza Campos x Avenida Eng^o Carlos Stevenson (b/c);
 - Avenida José de Souza Campos x Rua Gustavo Ambrust;

- Avenida José de Souza Campos x Rua dos Alecrins;
- Avenida José de Souza Campos x Avenida Orosimbo Maia;
- Avenida José de Souza Campos x Rua Oriente;
- Avenida José de Souza Campos x Rua Santo Antonio;
- Avenida José de Souza Campos x Rua Barreto Leme;
- Avenida José de Souza Campos x Rua Nuporanga;
- Avenida José de Souza Campos x Retorno prox. Nº 1960;
- Avenida José de Souza Campos x Rua Gal. Marcondes Salgado;
- Avenida Imperatriz Dona Tereza Cristina x Avenida Guarani;
- Avenida Dr. Arlindo Joaquim de Lemos x Rua Joaquim Roberto de Azevedo Marques;
- Avenida Princesa d'Oeste X Rua Joaquim Roberto Azevedo Marques;
- Avenida Princesa d'Oeste X Rua Joaquim de Paula Sousa;
- Avenida Princesa d'Oeste x Rua Uruguaiana (nova transposição);
- Avenida Princesa d'Oeste x Rua Proença (nova transposição);

16.2. Implantação de semáforo com fiação subterrânea na nova transposição do córrego da Avenida Princesa d'Oeste, próximo da Rua Avelino do Amaral e continuação da Rua Uruguaiana;

16.3. Implantação de semáforo com fiação subterrânea na nova transposição do córrego da Avenida Princesa d'Oeste e continuação da Rua Proença;

16.4. Reconfiguração semafórica com fiação subterrânea no cruzamento da Avenida Princesa d'Oeste com a Avenida Ayrton Senna;

16.5. Reconfiguração semafórica no cruzamento da Avenida Imperatriz Dona Tereza Cristina com a Avenida Guarani;

16.6. Implantação de semáforo no cruzamento da Avenida Monte Castelo com Rua Tomás Ortale;

16.7. Implantação de semáforo no cruzamento da Rua Joaquim de Paula Souza com Rua Joaquim Roberto de Azevedo Marques;

16.8. Reconfiguração semafórica do cruzamento da R. Frei José de Monte Carmelo com a Avenida Monte Castelo;

16.9. Reconfiguração geométrica do cruzamento da Avenida Monte Castelo com a Rua Tomás Ortale para a adequação dos elementos semafóricos;

17. Nos cruzamentos abaixo, retirar os prismas de concreto e a executar os canteiros com guias, sarjetas e acessibilidade:

-
- Rua Frei José de Monte Carmelo x Avenida Monte Castelo;
 - Avenida Princesa d'Oeste x Rua Joaquim Roberto de Azevedo Marques;
 - Avenida Princesa d'Oeste x Rua Joaquim de Paula Souza;
18. Requalificação dos pontos de ônibus do entorno do empreendimento e implantação de 09 abrigos padrão Emdec em plataforma elevada, nas proximidades do empreendimento;
 19. Sinalização horizontal, vertical e de orientação no entorno do empreendimento;
 20. Execução de acessibilidade, em atendimento às disposições da NBR 9050/15, em todo o entorno do empreendimento;
 21. Todos os projetos das intervenções acima descritas deverão ser apresentados para a Emdec e Prefeitura Municipal de Campinas, para aprovação dos órgãos competentes;
 22. Todas as intervenções deverão ser executadas às expensas do empreendedor.

Em face do exposto acima, do ponto de vista de trânsito, no que diz respeito ao sistema viário, nada temos a nos opor quanto à implantação do empreendimento em questão, desde que atendidas as exigências acima.

Encaminhamos, em anexo, mapa com desenho das intervenções a serem realizadas.

Sendo o que tínhamos a esclarecer, colocamo-nos à disposição de V.Sa., aproveitando a oportunidade para apresentar nossas cordiais saudações.

Atenciosamente,



Carlos José Barreiro
Diretor Presidente



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

ESTUDO DE TRÁFEGO



EDO ROCHA ARQUITETURAS

EMPREENDIMENTO RESIDENCIAL, COMERCIAL, HOTELEIRO E SERVIÇOS

ATENDIMENTO AO OFÍCIO EMDEC



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Em cumprimento ao estabelecido no Protocolo EMDEC nº 2016/18/124, itens 9, 10 e 11, apresentamos o Estudo de Tráfego para o cruzamento da Av. Dr. Moraes Salles x Av. Dr. Jesuino Marcondes Machado, contemplando o Manual de Análise de Estudo de Tráfego publicado em 2018.

Esta nova avaliação pretende expor as condições físico-operacionais do cruzamento na situação atual, utilizando a adequada metodologia para obtenção dos dados, projetar à rede a taxa de crescimento atual para o ano de projeto, adicionar a rede futura o carregamento do empreendimento neste específico segmento viário e demonstrar as condições de capacidade viária e de nível de serviço para a situação futura, com o objetivo de extinguir os questionamentos sobre o real impacto do empreendimento no cruzamento em questão.

O cruzamento operava no ano do estudo de 2016 com a relação quantitativa volume/capacidade e a relação qualitativa do nível de serviço da seguinte maneira:



Novas pesquisas de tráfego foram validadas juntamente com a EMDEC e foram realizadas nos dias típicos 22, 23 e 24 de outubro (terça, quarta e quinta). O método de coleta de dados foi através de filmagens com 3 câmeras devidamente posicionadas de maneira a visualizar todos os movimentos da pesquisa da contagem veicular classificada. Abaixo segue os movimentos:





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- | | | | |
|----|---|----|--|
| 1 | > | 2 | Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales |
| 1 | > | 3 | Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira |
| 1 | > | 4 | Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales |
| 2 | > | 4 | Av. Dr. Moraes Sales em frente |
| 4 | > | 2 | Av. Dr. Moraes Sales em frente |
| 4 | > | 3 | Av. Dr. Moraes Sales conv à dir. Av. Dr. Manoel Afonso Ferreira |
| 12 | > | 11 | Av. Dr. Moraes Sales conv à dir. Av. Dr. Jesuino Marcondes Machado |
| 12 | > | 14 | Av. Dr. Moraes Sales em frente |
| 13 | > | 11 | Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado |
| 13 | > | 12 | Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales |
| 13 | > | 14 | Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales |
| 14 | > | 12 | Av. Dr. Moraes Sales em frente |
| 23 | > | 21 | Av. Dr. Manoel Afonso Ferreira em frente |
| 23 | > | 22 | Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida |
| 24 | > | 21 | R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira |
| 24 | > | 22 | R. M. Maria Santa Margarida em frente |
| 24 | > | 23 | R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira |
| 34 | > | 32 | R. M. Maria Santa Margarida em frente |
| 35 | > | 32 | Av. Claudio Celestino Toletto Soares |

Os horários pesquisados foram das 07:00 às 10:00, das 11:00 às 14:00 e das 17:00 às 20:00, para todos os dias das pesquisas.

Consta no **Anexo 1 – Relatório de Pesquisas**, a íntegra dos dados coletados.

A sigla VEC é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla PCU, significa Passenger Car Unit ou mais conhecido como veículos equivalentes que representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores: Automóvel = 1,0 veículo equivalente; Caminhão = 2,5 veículos equivalentes; Ônibus = 2,0 veículos equivalentes.

Para a obtenção da hora pico, foram agregados os valores de hora em hora e detectada a hora mais carregada de cada pico (manhã, almoço e tarde). Após foram comparados os três dias de contagens e o pico do dia que apresentou o maior valor foi escolhido para ser simulado.



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Posto 5 - Dia 22/10/2019

MANHÃ

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2707 | |
| 2990 | |
| 3277 | |
| 3073 | 12047 |
| 2972 | 12311 |
| 2781 | 12102 |
| 2687 | 11512 |
| 2946 | 11385 |
| 2825 | 11239 |
| 2351 | 10809 |
| 2483 | 10605 |
| 2306 | 9965 |

FHP% 0,94

ALMOÇO

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2.283 | |
| 2.114 | |
| 2.045 | |
| 2.410 | 8.853 |
| 2.526 | 9.094 |
| 2.581 | 9.561 |
| 2.575 | 10.091 |
| 2.677 | 10.369 |
| 2.513 | 10.345 |
| 2.467 | 10.221 |
| 2.296 | 9.942 |
| 2.472 | 9.737 |

FHP% 0,97

TARDE

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2.675 | |
| 2.639 | |
| 2.741 | |
| 2.892 | 10.946 |
| 2.915 | 11.186 |
| 2.781 | 11.129 |
| 2.651 | 11.038 |
| 3.379 | 11.725 |
| 2.432 | 11.242 |
| 2.281 | 10.742 |
| 1.956 | 10.046 |
| 1.846 | 8.513 |

FHP% 0,87

Posto 5 - Dia 23/10/2019

MANHÃ

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2696 | |
| 2988 | |
| 3246 | |
| 3118 | 12048 |
| 3060 | 12412 |
| 2873 | 12297 |
| 2764 | 11815 |
| 2903 | 11600 |
| 2773 | 11313 |
| 2419 | 10859 |
| 2464 | 10550 |
| 2377 | 10035 |

FHP% 0,96

ALMOÇO

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2.239 | |
| 2.074 | |
| 2.163 | |
| 2.334 | 8.868 |
| 2.514 | 9.083 |
| 2.590 | 9.599 |
| 2.570 | 10.006 |
| 2.663 | 10.335 |
| 2.537 | 10.358 |
| 2.487 | 10.256 |
| 2.343 | 10.029 |
| 2.501 | 9.866 |

FHP% 0,97

TARDE

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2.666 | |
| 2.844 | |
| 2.792 | |
| 2.749 | 11.049 |
| 2.844 | 11.229 |
| 2.826 | 11.211 |
| 2.714 | 11.133 |
| 3.105 | 11.489 |
| 2.434 | 11.079 |
| 2.261 | 10.513 |
| 2.073 | 9.872 |
| 1.887 | 8.654 |

FHP% 0,93

Posto 5 - Dia 24/10/2019

MANHÃ

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2820 | |
| 2828 | |
| 3134 | |
| 2810 | 11592 |
| 2980 | 11752 |
| 2722 | 11645 |
| 2879 | 11381 |
| 2818 | 11399 |
| 2606 | 11024 |
| 2474 | 10777 |
| 2525 | 10423 |
| 2343 | 9948 |

FHP% 0,94

ALMOÇO

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2.271 | |
| 2.169 | |
| 2.469 | |
| 2.534 | 9.432 |
| 2.718 | 9.879 |
| 2.769 | 10.469 |
| 2.636 | 10.646 |
| 2.679 | 10.792 |
| 2.732 | 10.808 |
| 2.488 | 10.535 |
| 2.565 | 10.464 |
| 2.688 | 10.473 |

FHP% 0,98

TARDE

| VBC.EQUIV. | TOTAL GERAL |
|------------|-------------|
| 2.765 | |
| 2.901 | |
| 2.856 | |
| 2.637 | 11.159 |
| 2.998 | 11.392 |
| 2.804 | 11.294 |
| 2.639 | 11.078 |
| 2.732 | 11.173 |
| 2.685 | 10.859 |
| 2.608 | 10.664 |
| 2.401 | 10.425 |
| 1.975 | 9.868 |

FHP% 0,95

VERIFICAÇÃO DOS
MAIORES VALORES NO
VOLUME DA HORA PICO

MÁXIMO HORA-PICO MÁXIMO Dia 23/10/2019
MÁXIMO HORA-PICO MÁXIMO Dia 24/10/2019

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Fone/fax: (11) 4037-1308 / (11) 996.526.575



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Portanto o dia com maior volume de carregamento para o pico manhã foi dia 23/10, pico almoço dia 24/10 e pico tarde 22/10.

A hora do almoço tem a principal característica de aumento na volumetria devido ao fato do local estar próximo das três maiores instituições de ensino particulares e a via servir de acesso ao Shopping Galeria que é um importante atrativo de viagens para alimentação.

Abaixo segue tabela contendo os volumes de cada movimento de cada hora pico detectada que foram inseridos no programa de microsimulação de tráfego para obtenção dos principais indicadores.

Nós 70, 32 e 33 - Dia 23/10/2019

| MANHÃ | 07:15 AS 08:15 | | | |
|--------------|----------------|------|--------|------|
| | Volume simples | V.C. | % V.C. | fhp |
| MOV. 1 > 2 | 65 | 3 | 4,6% | 0,96 |
| MOV. 1 > 3 | 479 | 5 | 1,0% | |
| MOV. 1 > 4 | 112 | 3 | 2,7% | |
| MOV. 2 > 4 | 1.942 | 77 | 4,0% | |
| MOV. 4 > 2 | 1.649 | 97 | 5,9% | |
| MOV. 4 > 3 | 327 | 7 | 2,1% | |
| MOV. 12 > 11 | 262 | 2 | 0,8% | |
| MOV. 12 > 14 | 1.650 | 72 | 4,4% | |
| MOV. 13 > 11 | 733 | 14 | 1,9% | |
| MOV. 13 > 12 | 66 | 1 | 1,5% | |
| MOV. 13 > 14 | 292 | 5 | 1,7% | |
| MOV. 14 > 12 | 1.714 | 100 | 5,8% | |
| MOV. 23 > 21 | 761 | 11 | 1,4% | |
| MOV. 23 > 22 | 56 | 0 | 0,0% | |
| MOV. 24 > 21 | 326 | 5 | 1,5% | |
| MOV. 24 > 22 | 220 | 9 | 4,1% | |
| MOV. 24 > 23 | 336 | 11 | 3,3% | |
| MOV. 34 > 32 | 497 | 7 | 1,4% | |
| MOV. 35 > 32 | 381 | 14 | 3,7% | |

Nós 70, 32 e 33 - Dia 24/10/2019

| ALMOÇO | 12:15 AS 13:15 | | | |
|--------------|----------------|------|--------|------|
| | Volume simples | V.C. | % V.C. | fhp |
| MOV. 1 > 2 | 177 | 1 | 0,6% | 0,98 |
| MOV. 1 > 3 | 533 | 6 | 1,1% | |
| MOV. 1 > 4 | 153 | 4 | 2,6% | |
| MOV. 2 > 4 | 1.458 | 48 | 3,3% | |
| MOV. 4 > 2 | 1.518 | 50 | 3,3% | |
| MOV. 4 > 3 | 447 | 6 | 1,3% | |
| MOV. 12 > 11 | 250 | 1 | 0,4% | |
| MOV. 12 > 14 | 1.217 | 42 | 3,5% | |
| MOV. 13 > 11 | 434 | 10 | 2,3% | |
| MOV. 13 > 12 | 99 | 8 | 8,1% | |
| MOV. 13 > 14 | 241 | 6 | 2,5% | |
| MOV. 14 > 12 | 1.695 | 51 | 3,0% | |
| MOV. 23 > 21 | 407 | 13 | 3,2% | |
| MOV. 23 > 22 | 66 | 1 | 1,5% | |
| MOV. 24 > 21 | 366 | 10 | 2,7% | |
| MOV. 24 > 22 | 215 | 5 | 2,3% | |
| MOV. 24 > 23 | 284 | 10 | 3,5% | |
| MOV. 34 > 32 | 558 | 15 | 2,7% | |
| MOV. 35 > 32 | 303 | 6 | 2,0% | |



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Nós 70, 32 e 33 - Dia 22/10/2019

| TARDE | 18:00 AS 19:00 | | | fhp |
|--------------|----------------|------|--------|------|
| | Volume simples | V.C. | % V.C. | |
| MOV. 1 > 2 | 171 | 1 | 0,6% | 0,87 |
| MOV. 1 > 3 | 750 | 8 | 1,1% | |
| MOV. 1 > 4 | 86 | 1 | 1,2% | |
| MOV. 2 > 4 | 1.756 | 60 | 3,4% | |
| MOV. 4 > 2 | 1.606 | 56 | 3,5% | |
| MOV. 4 > 3 | 471 | 7 | 1,5% | |
| MOV. 12 > 11 | 214 | 1 | 0,5% | |
| MOV. 12 > 14 | 1.612 | 60 | 3,7% | |
| MOV. 13 > 11 | 418 | 4 | 1,0% | |
| MOV. 13 > 12 | 102 | 0 | 0,0% | |
| MOV. 13 > 14 | 144 | 0 | 0,0% | |
| MOV. 14 > 12 | 1.777 | 57 | 3,2% | |
| MOV. 23 > 21 | 317 | 3 | 0,9% | |
| MOV. 23 > 22 | 53 | 0 | 0,0% | |
| MOV. 24 > 21 | 351 | 5 | 1,4% | |
| MOV. 24 > 22 | 173 | 1 | 0,6% | |
| MOV. 24 > 23 | 442 | 9 | 2,0% | |
| MOV. 34 > 32 | 646 | 14 | 2,2% | |
| MOV. 35 > 32 | 319 | 0 | 0,0% | |

Para a avaliação da capacidade viária, utiliza-se o conceito de nível de serviço viário definido pelo Highway Capacity Manual (HCM-2010), através do qual a capacidade básica por faixa de tráfego é de 1.900 veículos/hora por faixa de circulação com largura de 3,6 metros. Estes valores vão diminuindo em função das características geométricas da via, interferências operacionais de manobras de estacionamento, travessia de pedestres, conversões à esquerda e direita, dentre outros. Para a análise do nível de serviço atual foi utilizado programa de micro simulação de tráfego Sim Traffic. Abaixo segue tabela do Nível de Serviço (LOS) para interseções semaforizadas conforme HCM 2010.

Table 4-1 Signalized Intersection Level of Service (2010 HCM)

| Control Delay Per Vehicle (s) | LOS by Volume to Capacity Ratio | |
|-------------------------------|---------------------------------|----|
| | ≤1 | >1 |
| ≤10 | A | F |
| >10 and ≤20 | B | F |
| >20 and ≤35 | C | F |
| >35 and ≤55 | D | F |
| >55 and ≤80 | E | F |
| >80 | F | F |

A sequência de figuras abaixo mostrará os dados imputados para o ano de 2019, além dos indicadores das simulações de tráfego realizadas para os picos manhã, almoço e tarde, afim de compreensão da situação atual de operação dos cruzamentos.



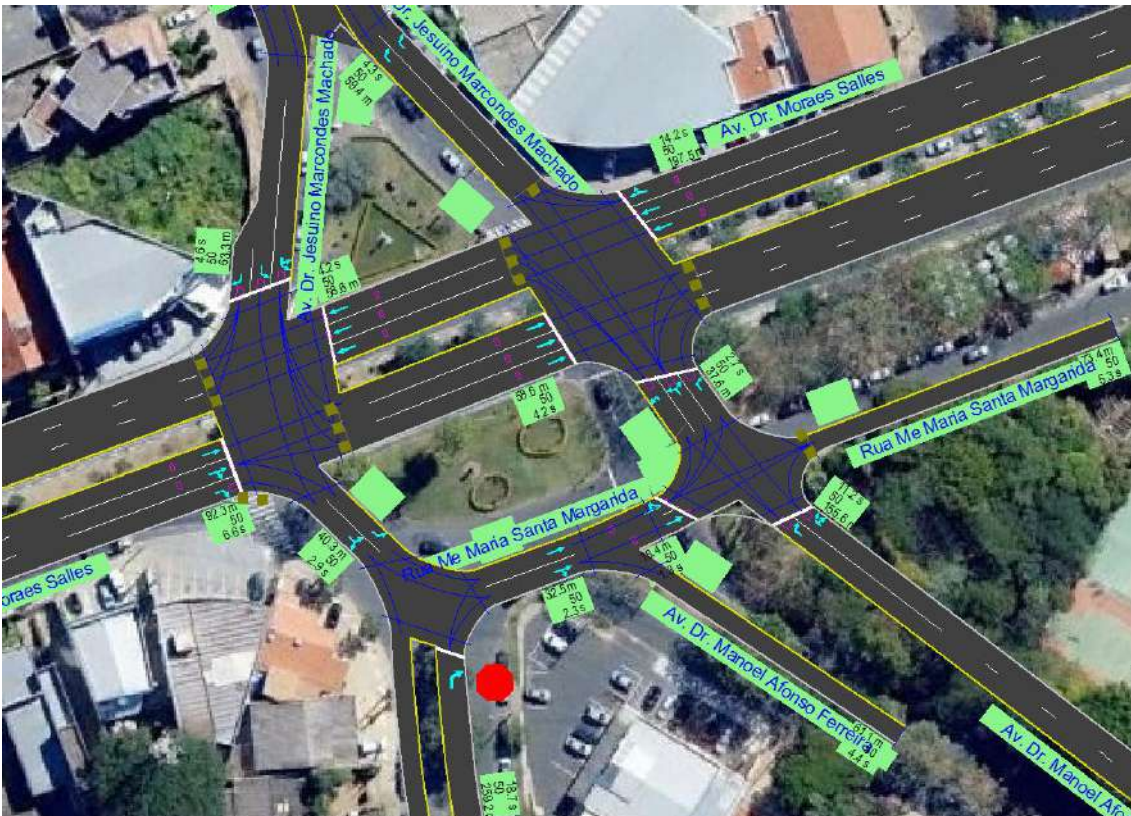
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Nome das vias e número dos nós



Tempo de percurso, velocidade da via e distância percorrida.



Hora pico manhã 2019



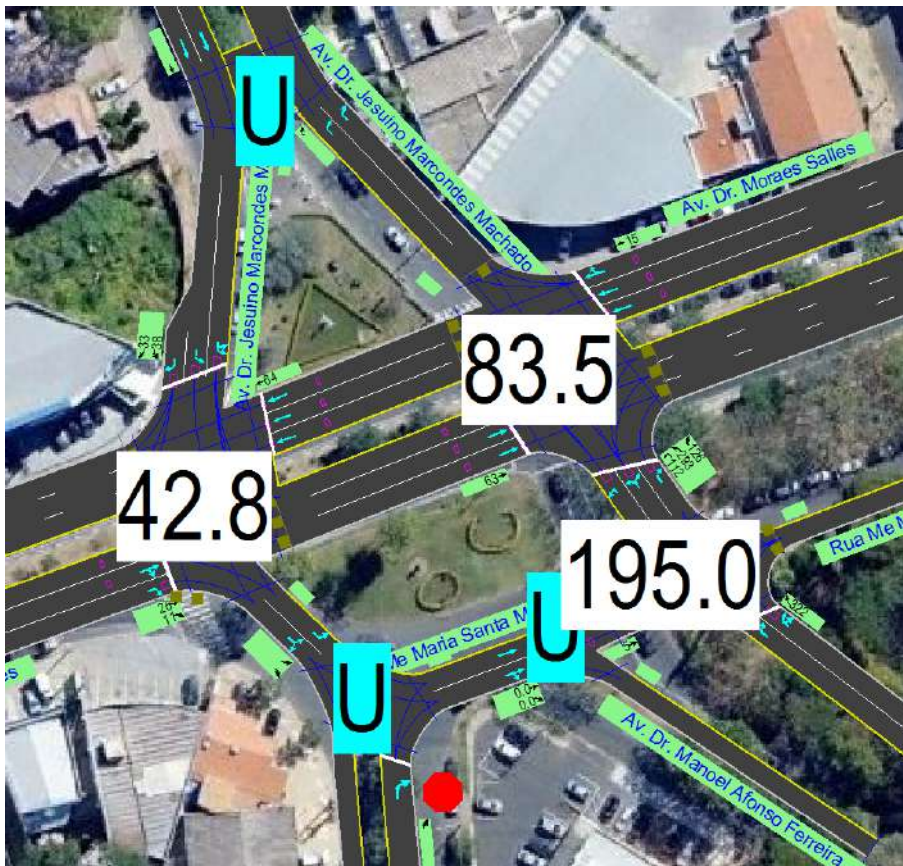
AGESUS – Mobilidade Sustentável

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Volumes

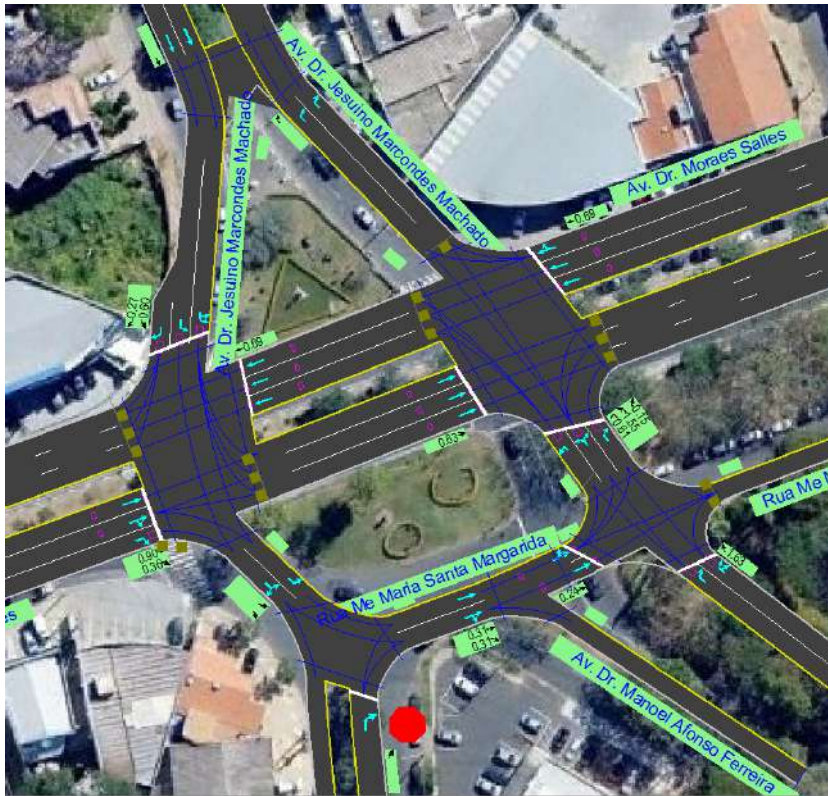


Atrasos

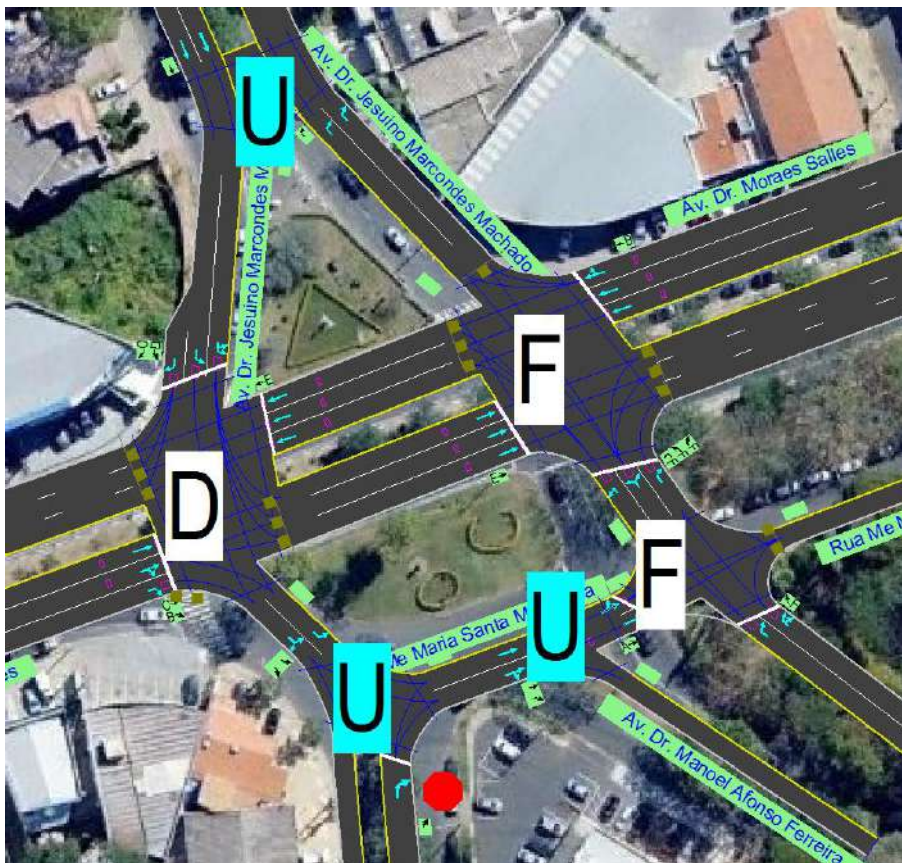




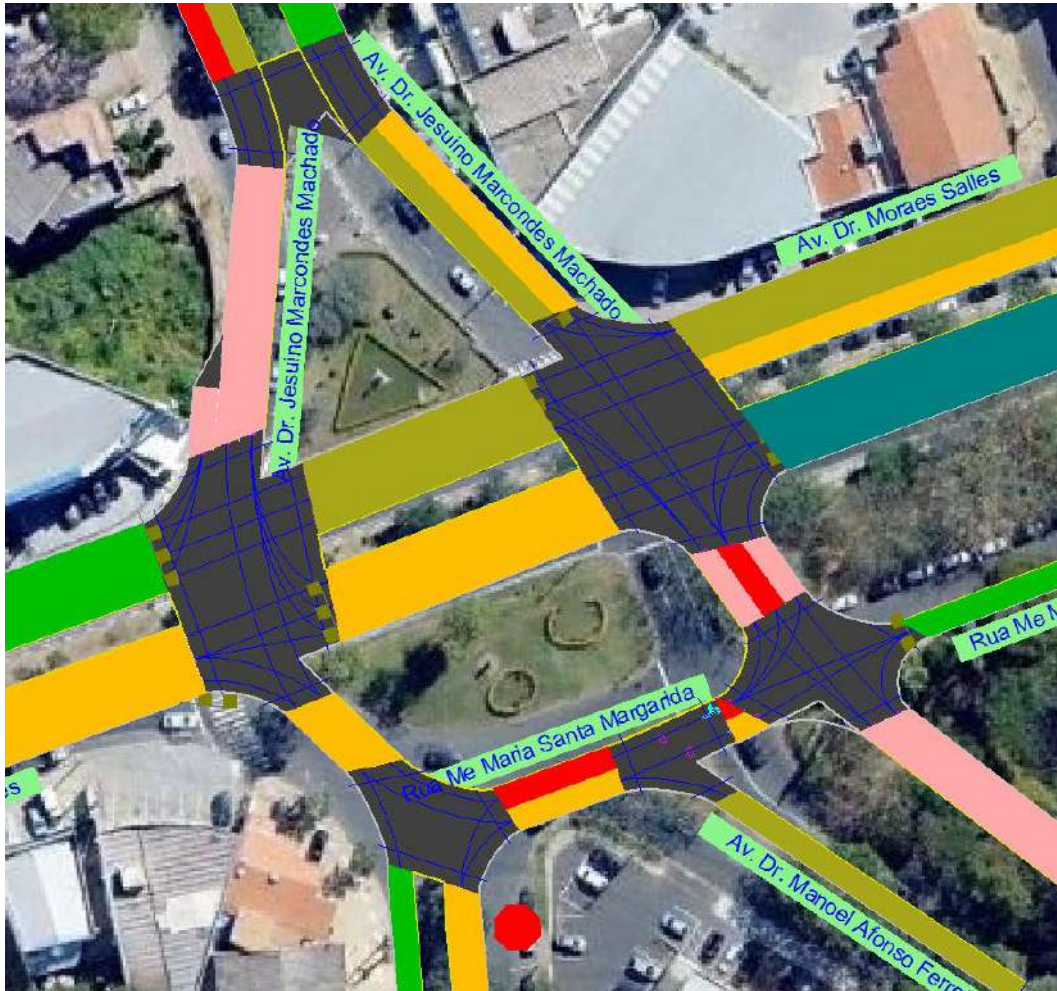
Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento



Velocidades médias



A tabela abaixo mostra a legenda de cores e a velocidade correspondente:

| Speed | |
|---------------|----------|
| All Intervals | |
| Color | kph |
| Black | >= 60 |
| Dark Green | 45 to 60 |
| Light Green | 30 to 45 |
| Olive Green | 20 to 30 |
| Yellow | 10 to 20 |
| Red | 5 to 10 |
| Pink | < 5 |



Hora pico almoço 2019

Volumes

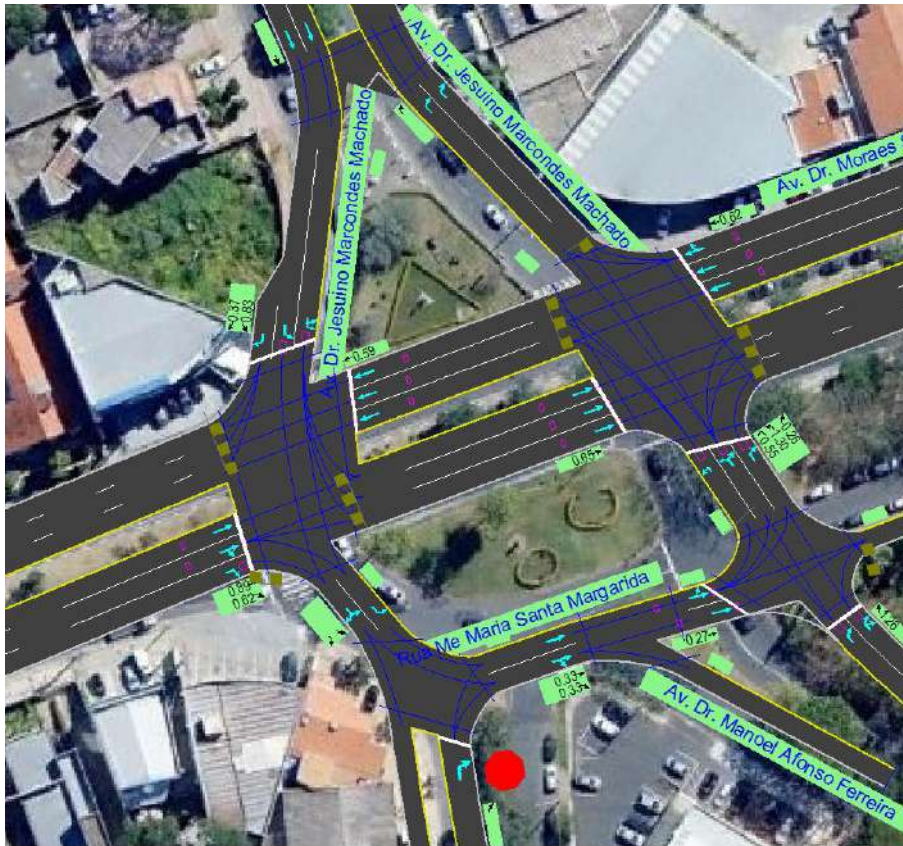


Atrasos

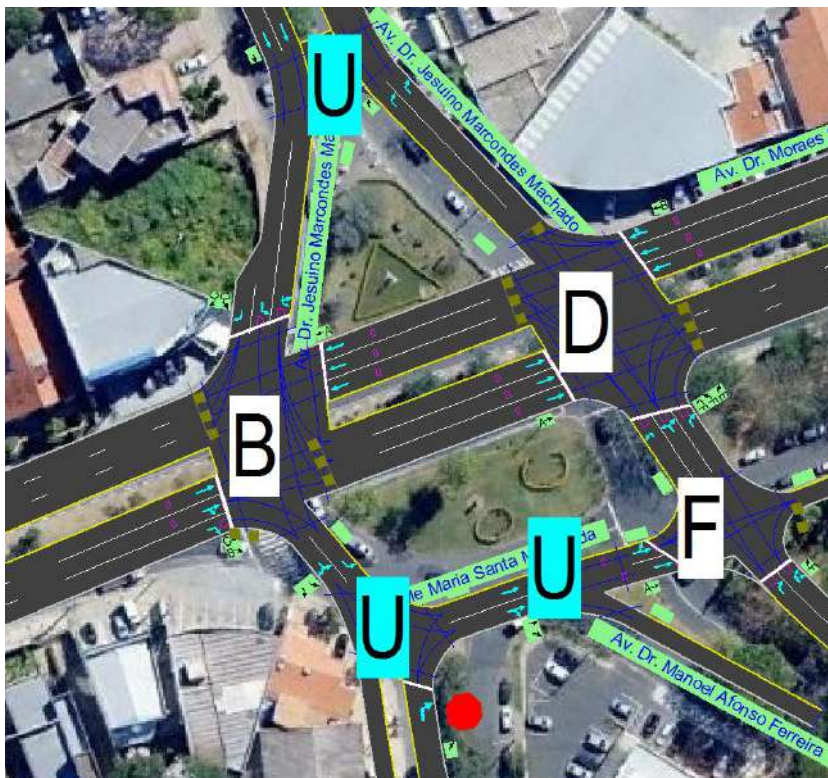




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

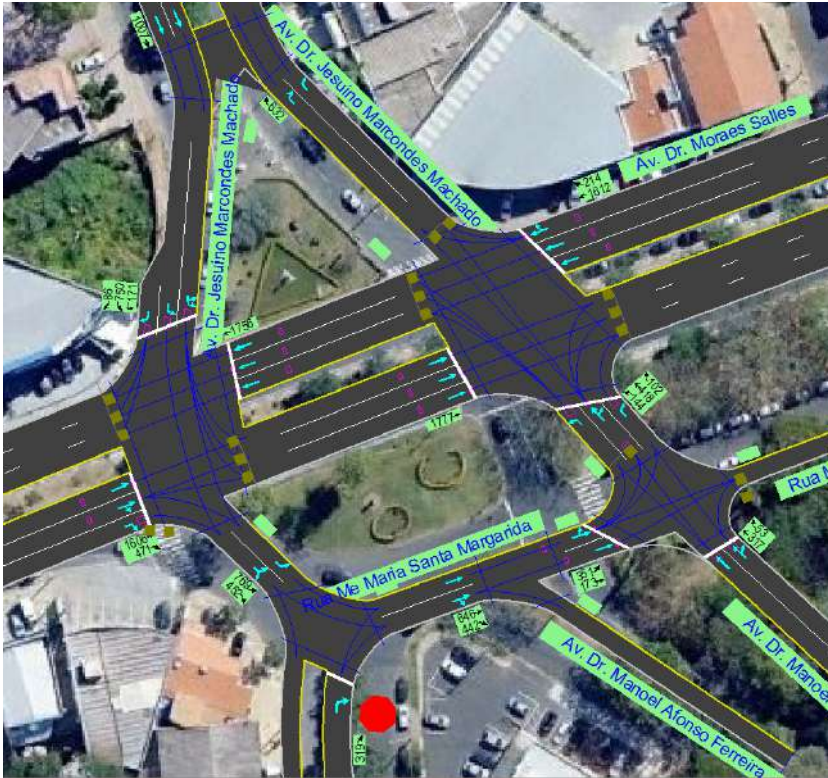
Velocidades médias





Hora pico tarde 2019

Volumes

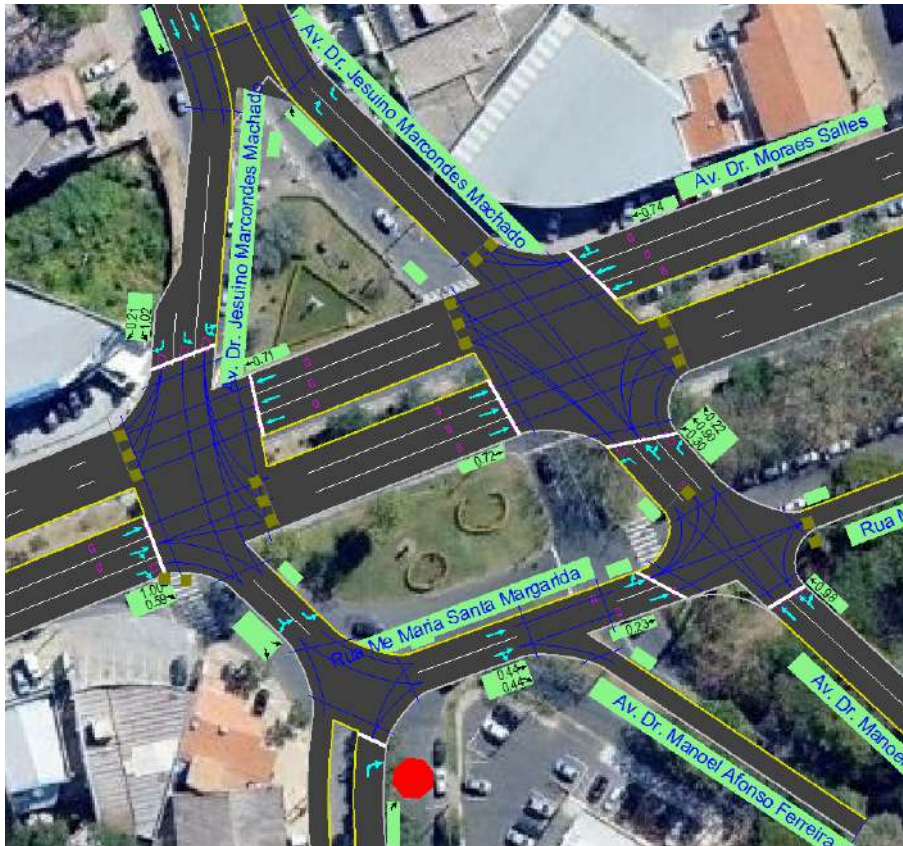


Atrasos

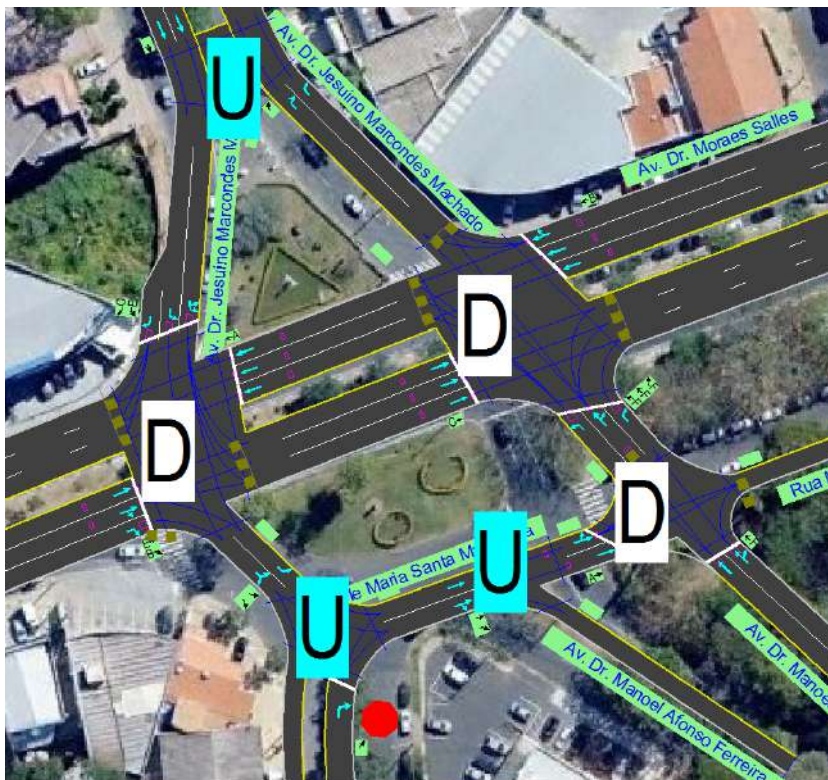




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento





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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Velocidades médias





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30



| | volumes | | variação % |
|-----------------------------|---------|--------------|--------------|
| | 2016 | 2019 | dos volumes |
| aprox Dr. Jesuino | 764 | 656 | -14,1% |
| aprox Moares Salles - Leste | 2076 | 1976 | -4,8% |
| aprox Moares Salles - Oeste | 2234 | 1912 | -14,4% |
| aprox Dr. Manoel | 716 | 817 | 14,1% |
| aprox Av. Claudio | 413 | 381 | -7,7% |
| | | Média | -5,4% |

| | volumes | | variação % |
|-----------------------------|---------|--------------|-------------|
| | 2016 | 2019 | dos volumes |
| aprox Dr. Jesuino | 867 | 863 | -0,5% |
| aprox Moares Salles - Leste | 1675 | 1965 | 17,3% |
| aprox Moares Salles - Oeste | 1756 | 1467 | -16,5% |
| aprox Dr. Manoel | 387 | 473 | 22,2% |
| aprox Av. Claudio | 303 | 303 | 0,0% |
| | | Média | 4,5% |

| | volumes | | variação % |
|-----------------------------|---------|--------------|--------------|
| | 2016 | 2019 | dos volumes |
| aprox Dr. Jesuino | 1115 | 1007 | -9,7% |
| aprox Moares Salles - Leste | 2026 | 2077 | 2,5% |
| aprox Moares Salles - Oeste | 1679 | 1826 | 8,8% |
| aprox Dr. Manoel | 400 | 370 | -7,5% |
| aprox Av. Claudio | 457 | 319 | -30,2% |
| | | Média | -7,2% |

Comparativamente os volumes dos anos de 2016 e 2019 sofreram um declínio nos principais picos representativos. Isso demonstra o que o IPEA já vem detectando, que é redução na expectativa de crescimento da economia dos últimos anos. Para fins de projeção do tráfego futuro foi considerada uma taxa de crescimento uniforme de 2,0% ao ano. Portanto o fluxo de cada aproximação foi multiplicado pelo fator de aumento de 1,13.

| | |
|-------------------------|--------------|
| Projeção | |
| 2020 | 2,00% |
| 2021 | 2,00% |
| 2022 | 2,00% |
| 2023 | 2,00% |
| 2024 | 2,00% |
| 2025 | 2,00% |
| fator de aumento | 1,13 |

Com esta projeção a relação volume/capacidade opera da seguinte maneira:



Hora pico manhã 2025

Volumes



Atrasos

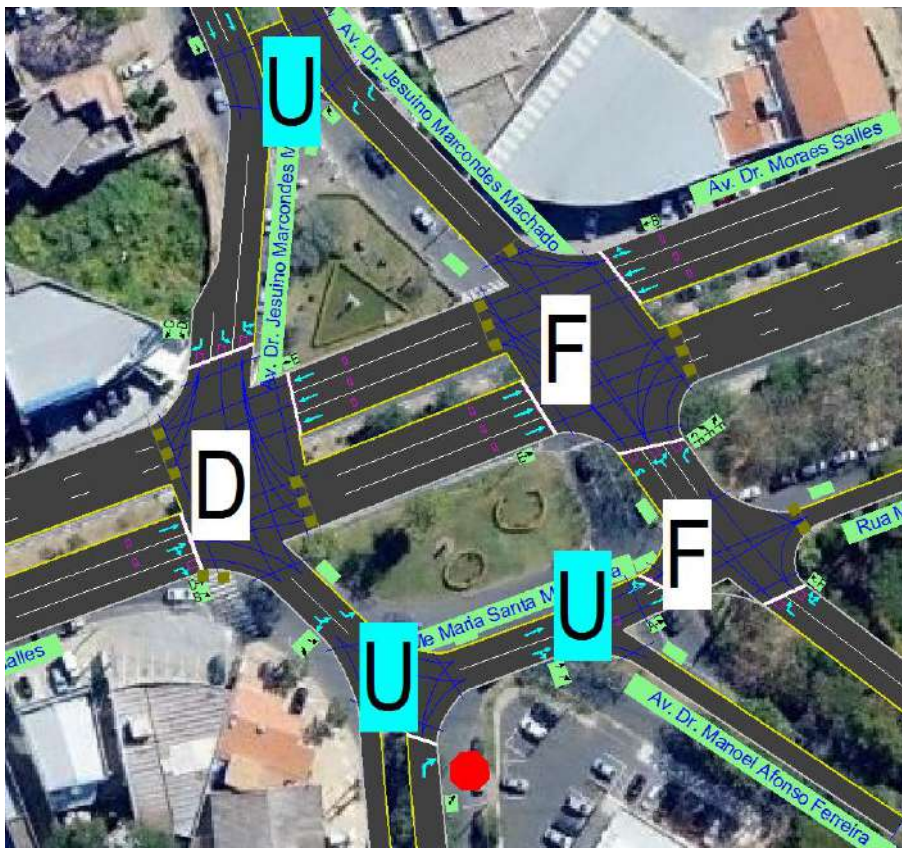




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

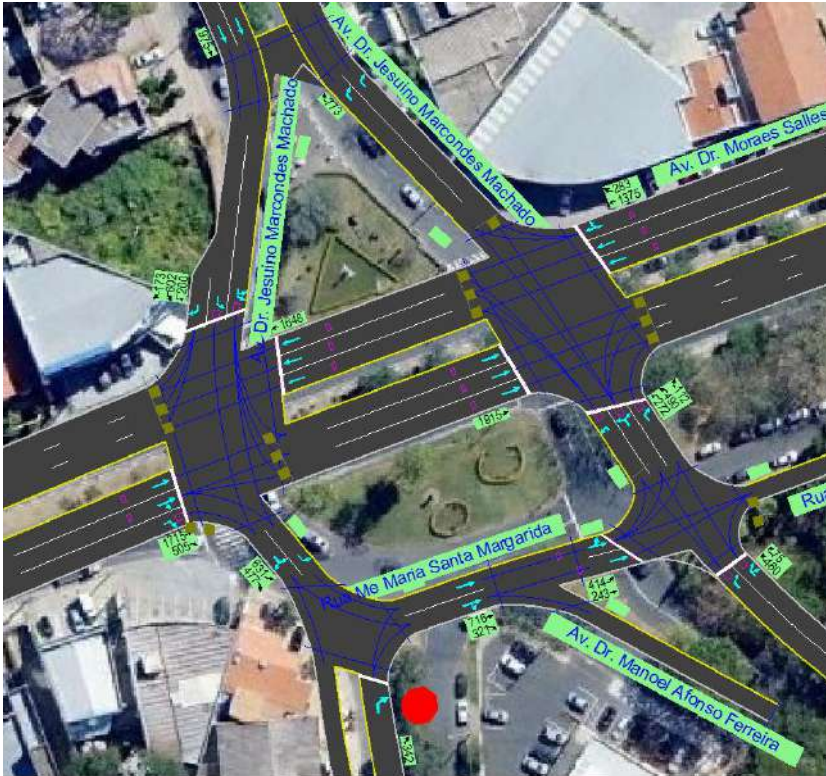
Velocidades médias





Hora pico almoço 2025

Volumes

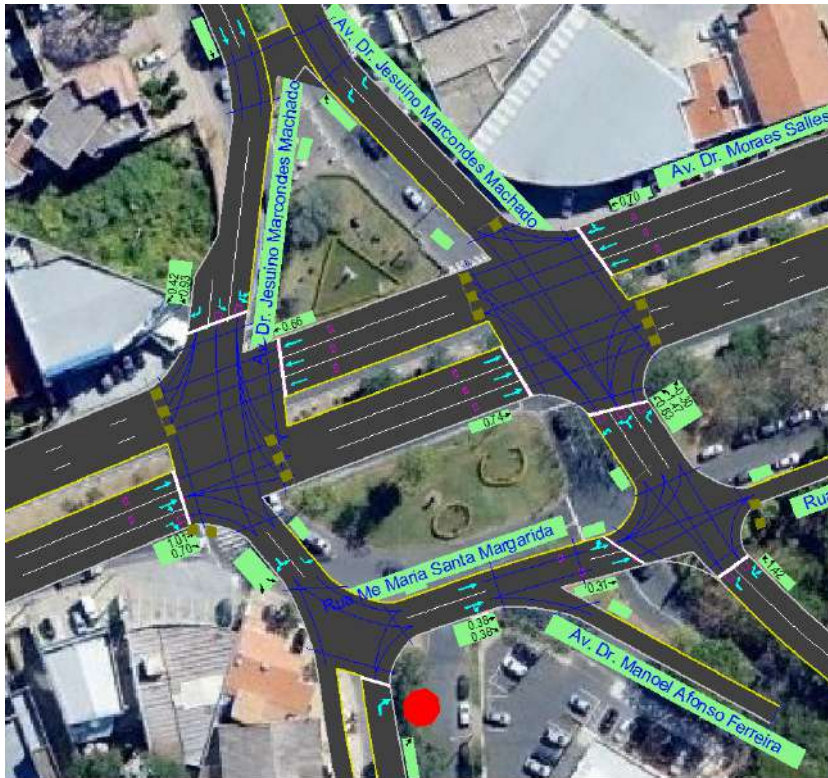


Atrasos

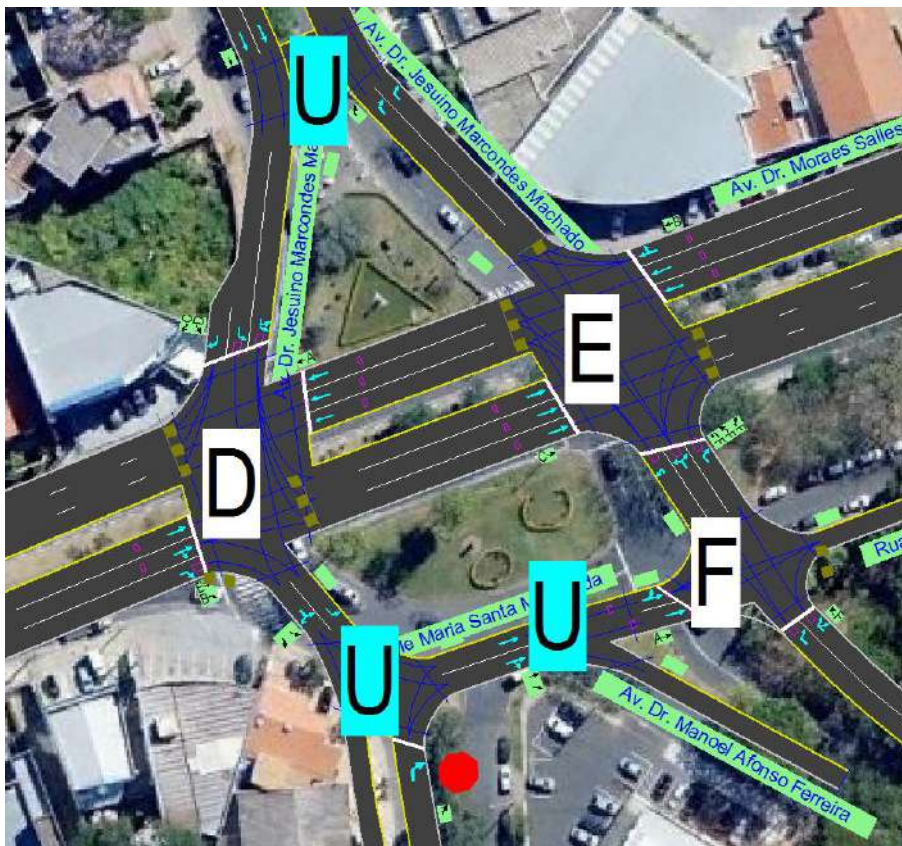




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Velocidades médias





Hora pico tarde 2025

Volumes



Atrasos

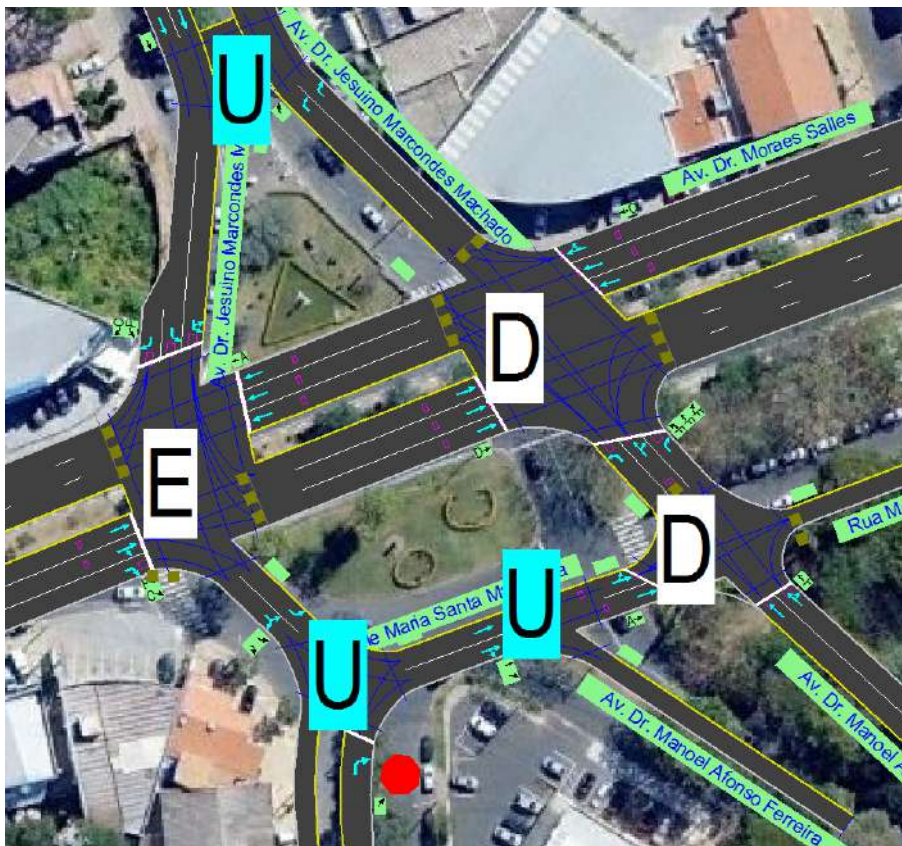




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Velocidades médias





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30



Sabe-se a taxa de ocupação de imóveis para o município de Campinas está em torno de 90%. Mesmo o empreendimento estando 90% ocupado em 2025 considerou-se que nesta data, o seu carregamento será total.

Abaixo segue os volumes gerados/atraídos pelo empreendimento no complexo de vias deste estudo para os picos manhã e tarde.





AGESUS – Mobilidade Sustentável

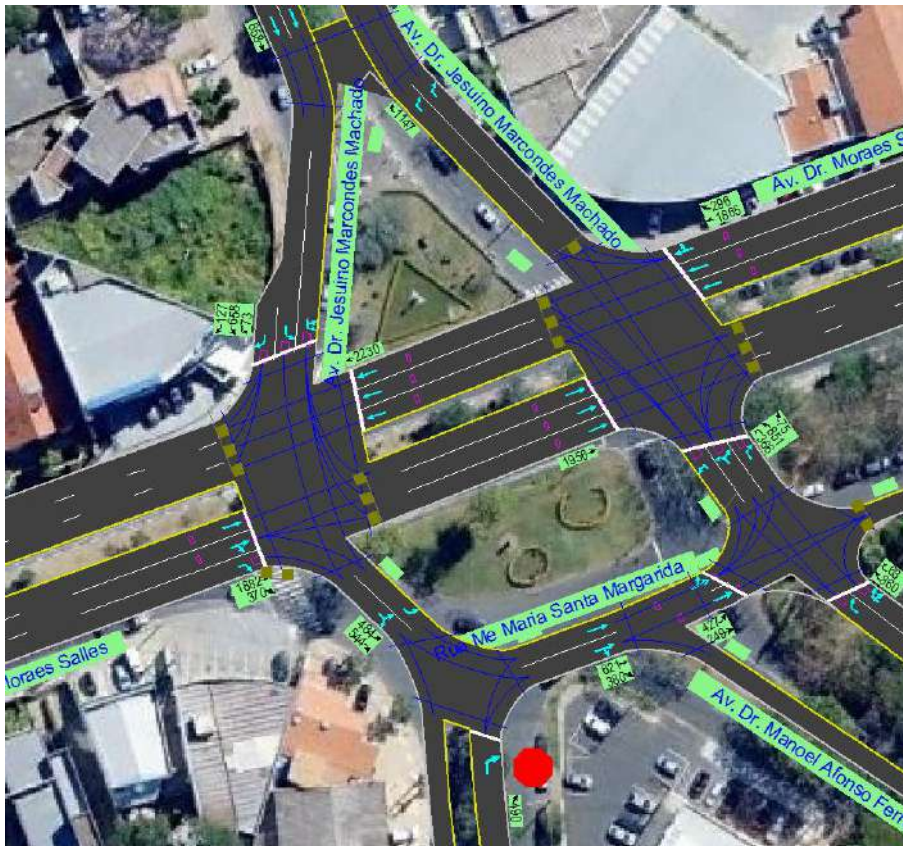
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Adicionando-se o tráfego do empreendimento sem que haja nenhuma medida de melhoria do controle semafórico, nas interseções de maior representatividade, operam da seguinte maneira no ano de 2025:

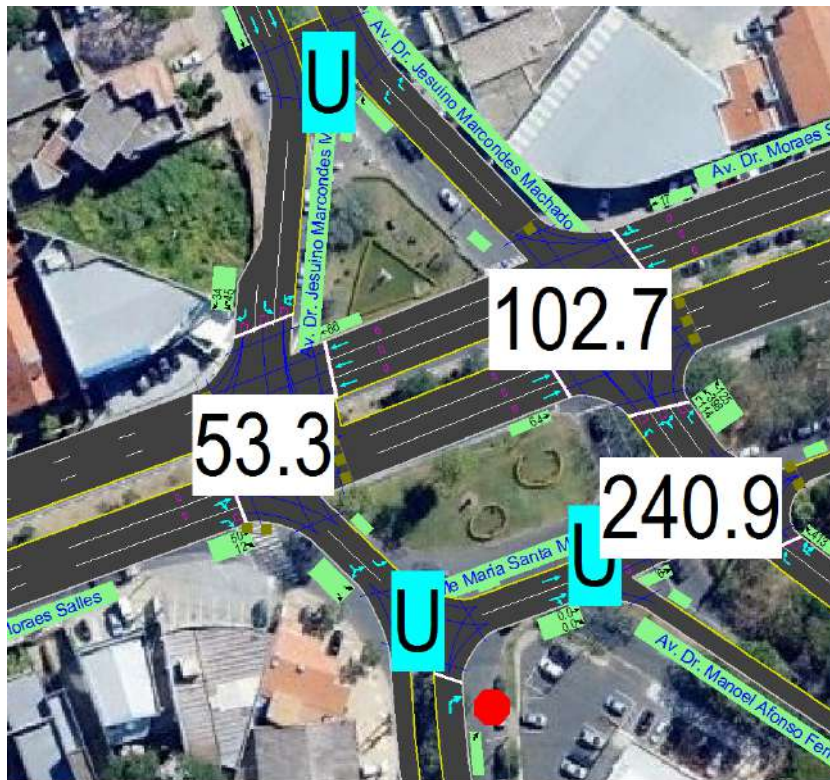
Hora pico manhã 2025 com empreendimento

Volumes

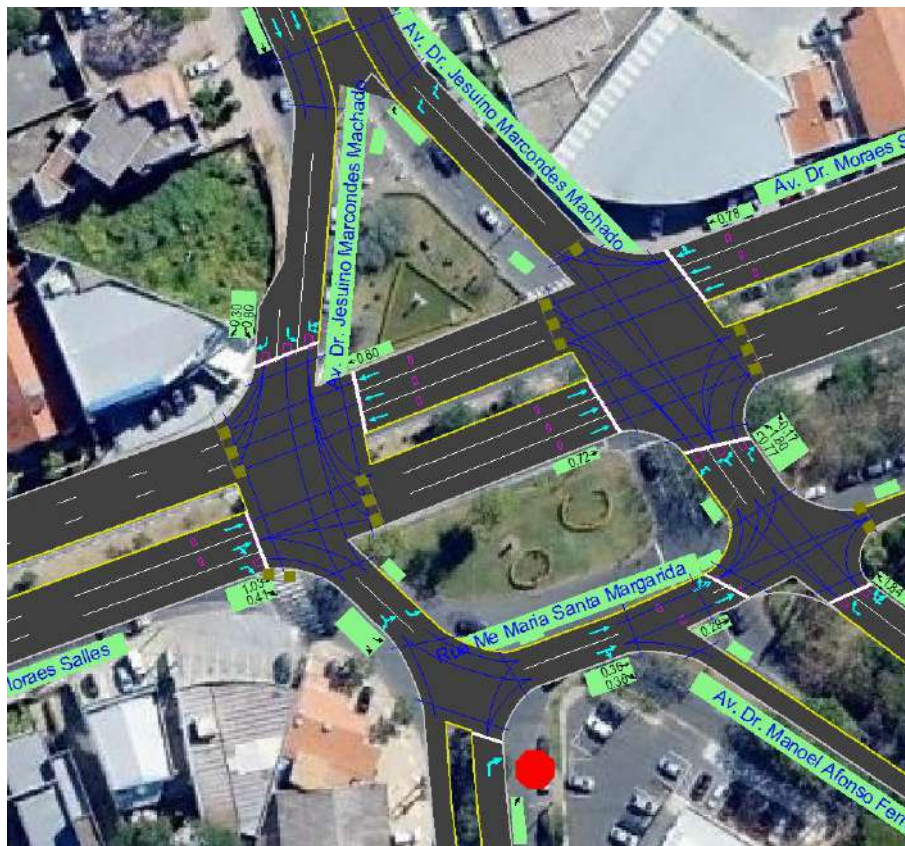




Atrasos



Relação Volume / Capacidade

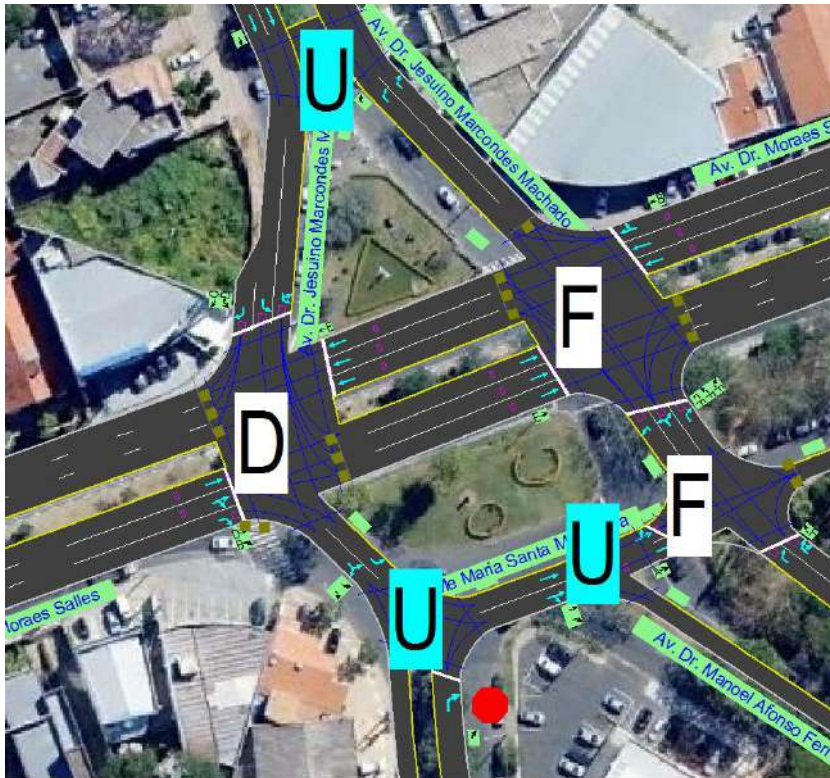




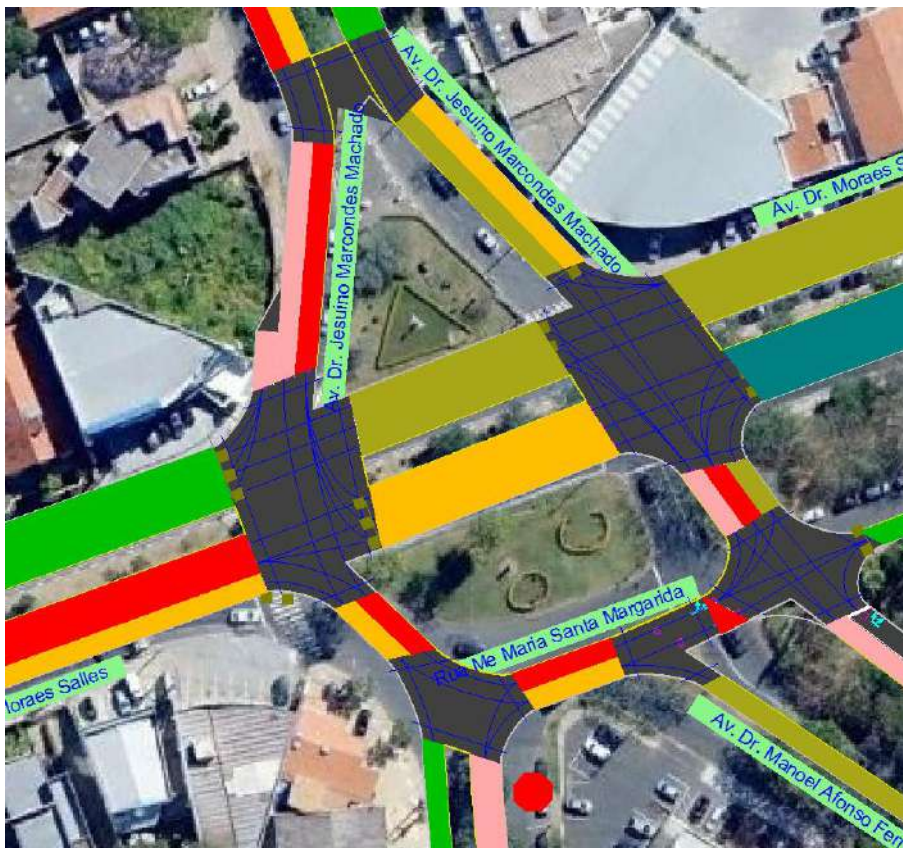
AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Nível de serviço por aproximação e do cruzamento



Velocidades médias

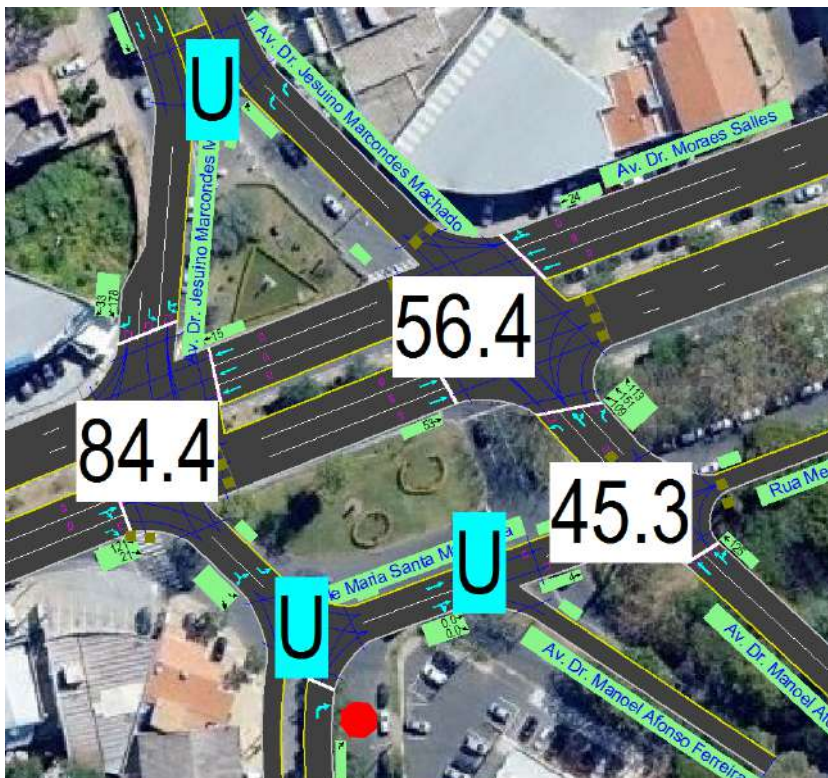




Hora pico tarde 2025 com empreendimento
Volumes



Atrasos

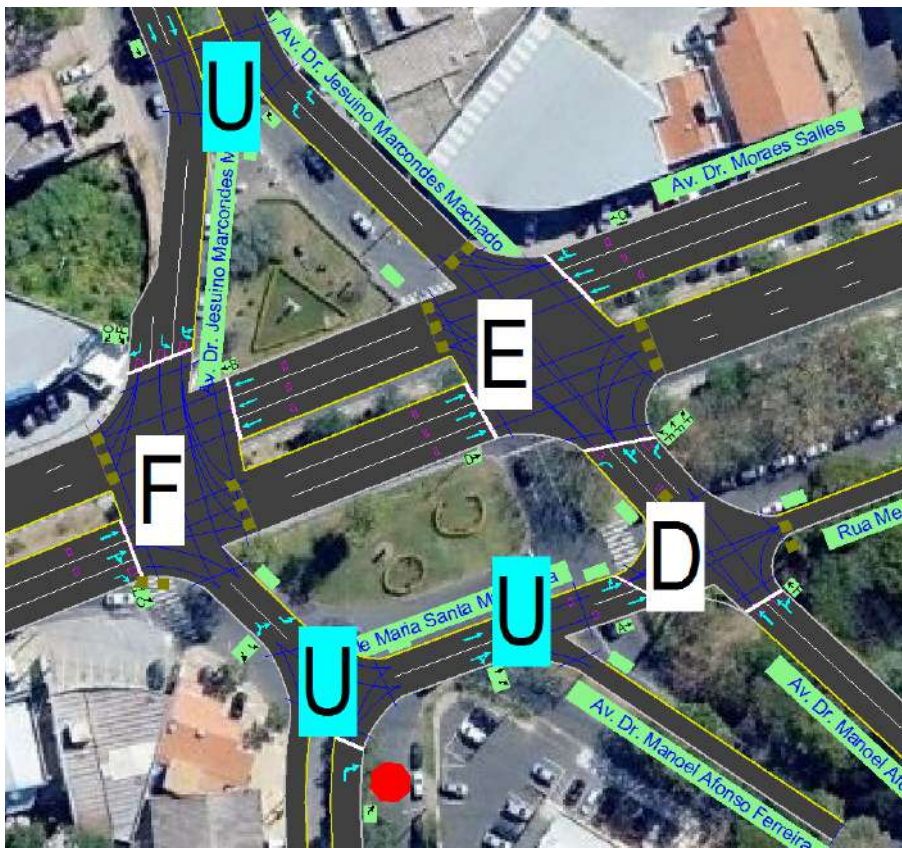




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento

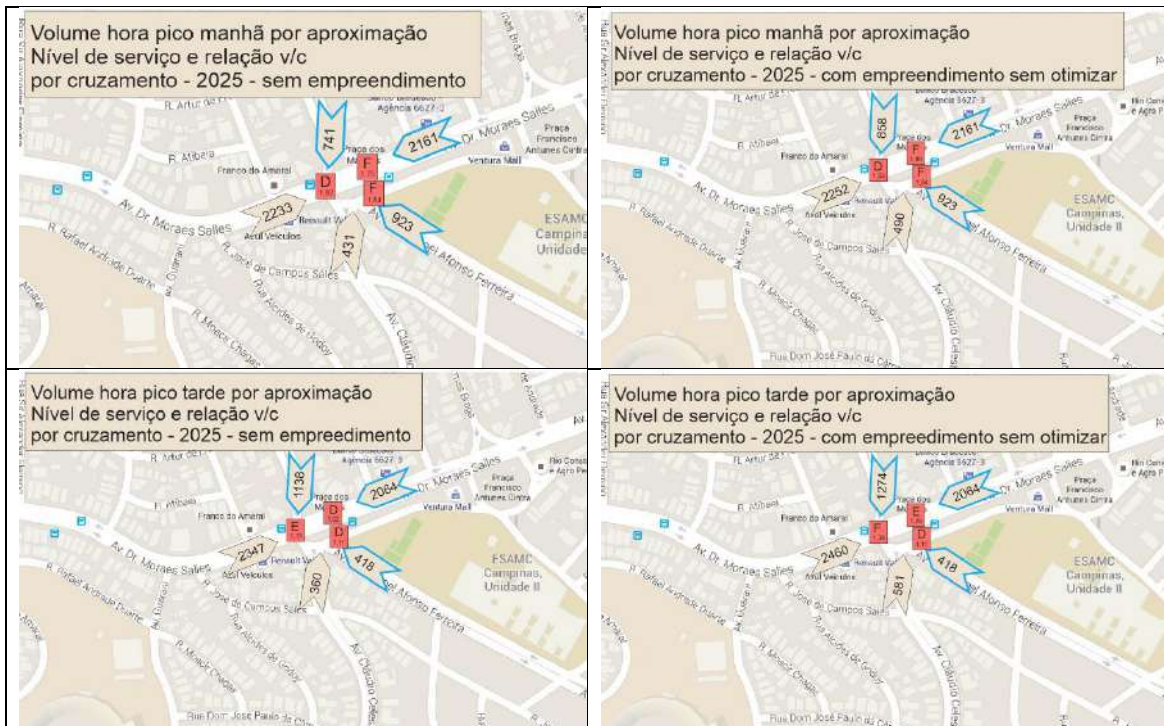
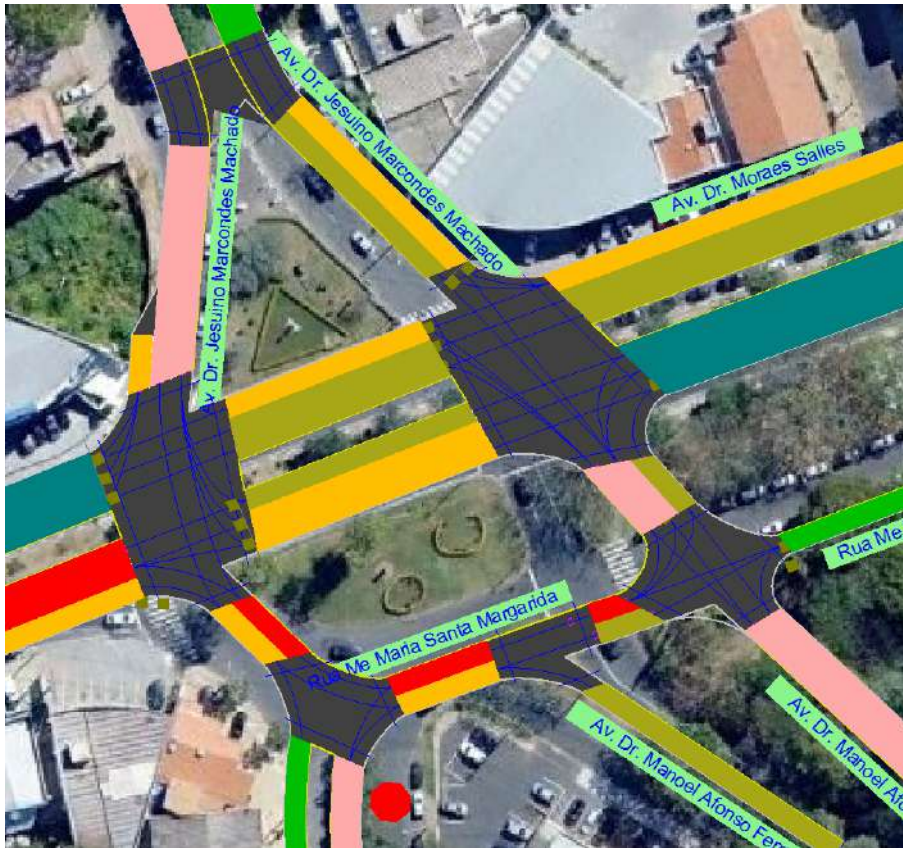




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Velocidades médias





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Tendo como base os dados obtidos nas etapas anteriores, o presente estudo apresenta as medidas necessárias para mitigação dos impactos viários produzidos pela implantação do empreendimento. As medidas tomadas devem ser capazes de atenuar, reparar, controlar ou eliminar seus efeitos indesejáveis sob a circulação viária.

A partir da análise dos dados apresentados, propõe-se medidas mitigatórias de otimização do complexo semaforizado existente. A modernização dos controladores semaforizados que possam dispor de recursos que propiciem a variação do tempo de duração de estágios em função de demandas geradas por detectores veiculares e que possa operar de maneira coordenada com os demais controladores foi simulada. Abaixo seus resultados.

Hora pico manhã 2025 com empreendimento

Volumes

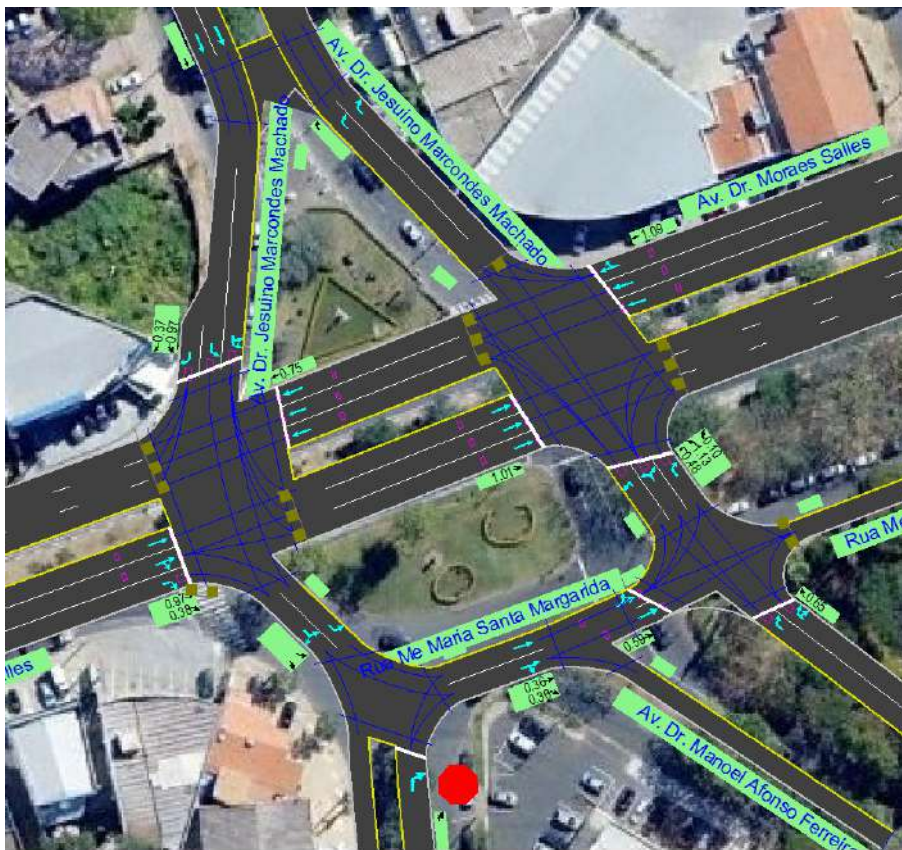




Atrasos

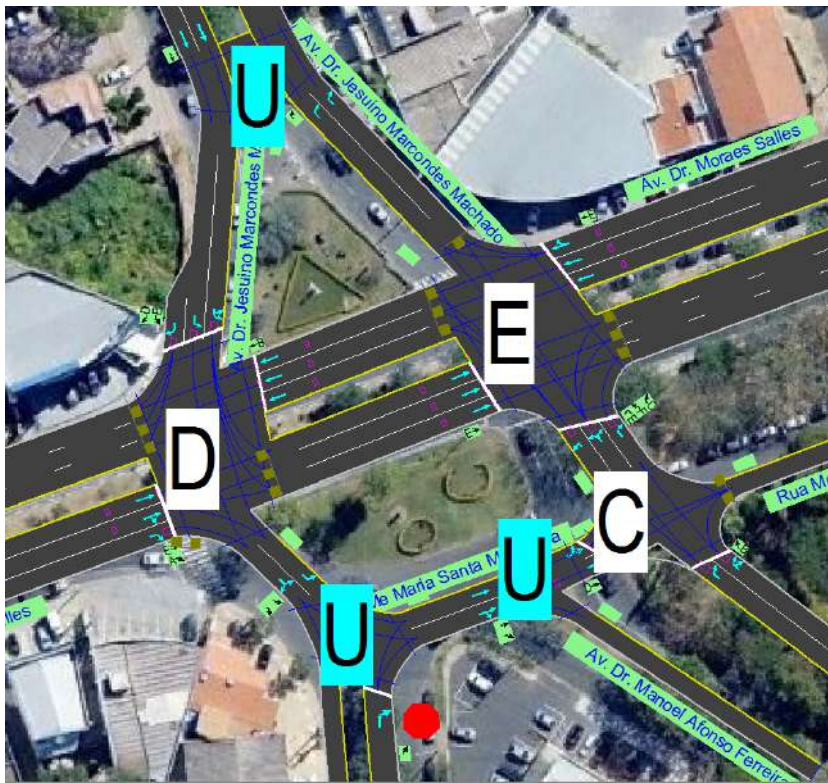


Relação Volume / Capacidade





Nível de serviço por aproximação e do cruzamento

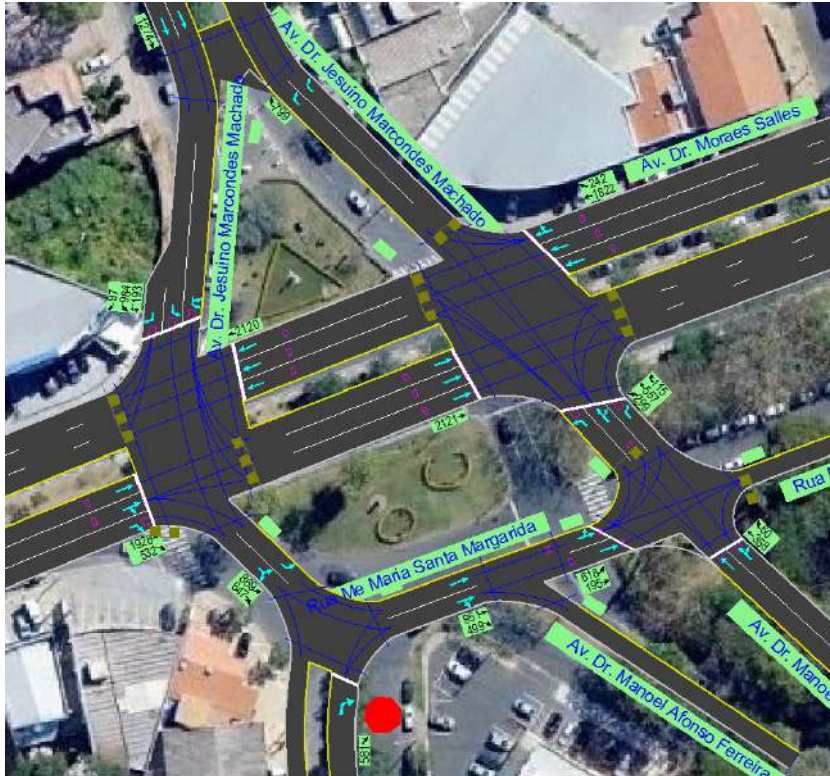


Velocidades médias

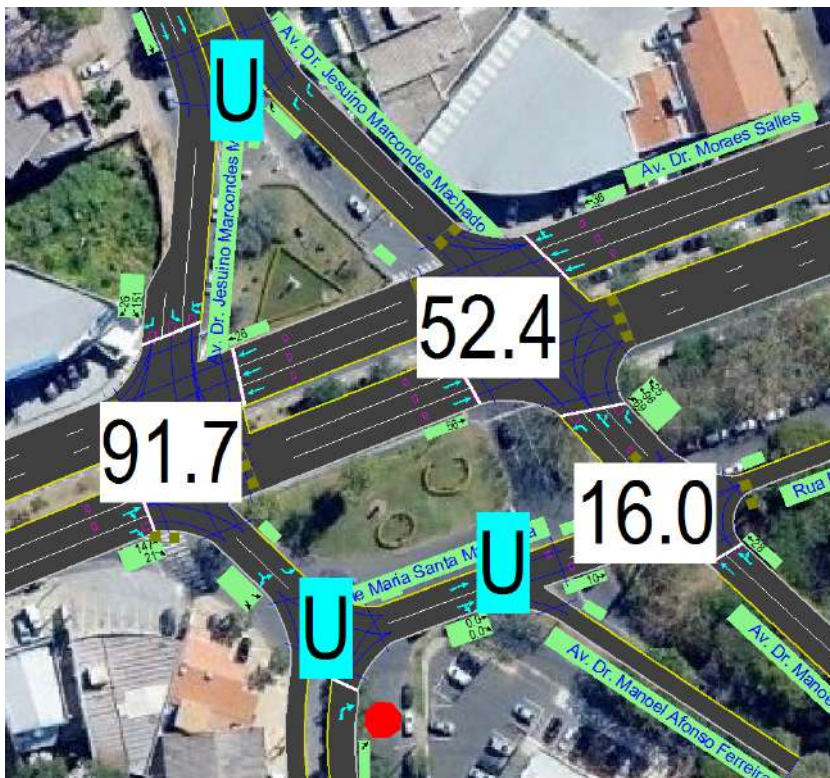




Hora pico tarde 2025 com empreendimento
Volumes

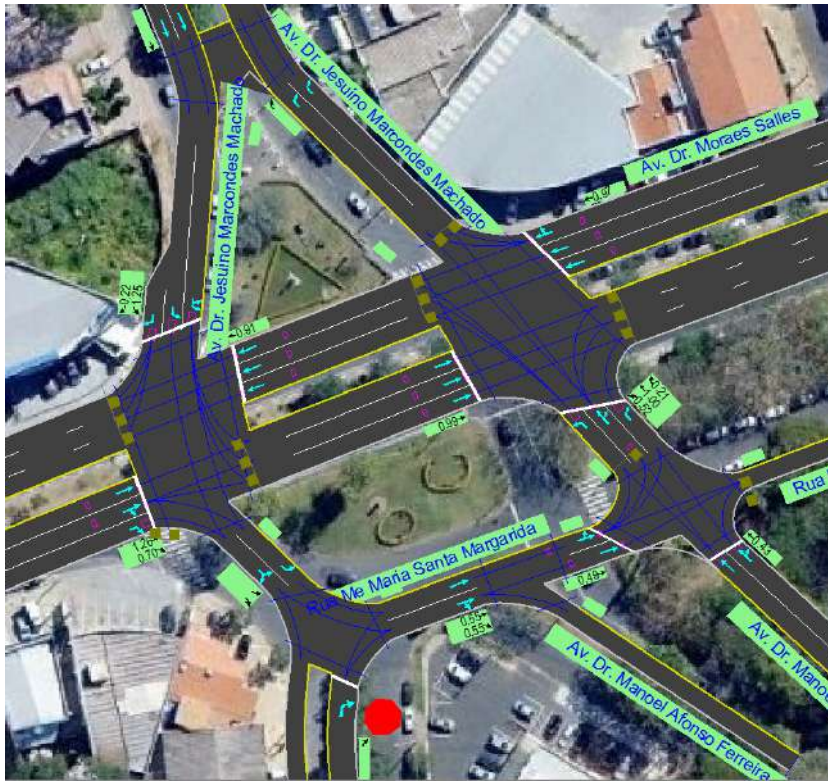


Atrasos

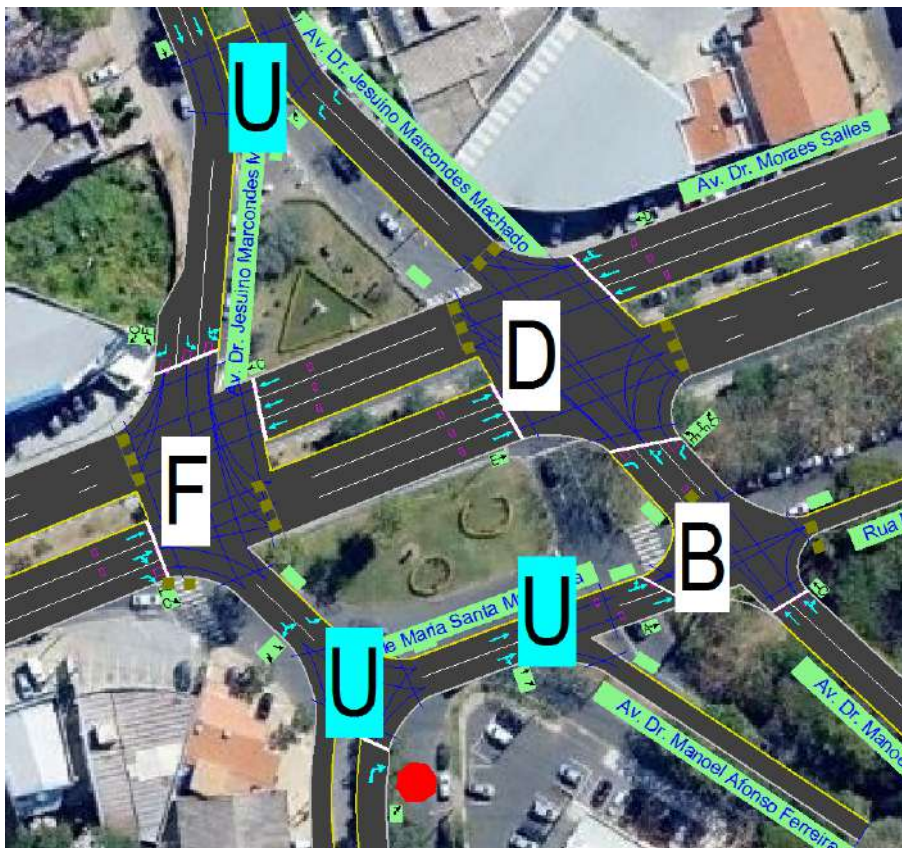




Relação Volume / Capacidade



Nível de serviço por aproximação e do cruzamento

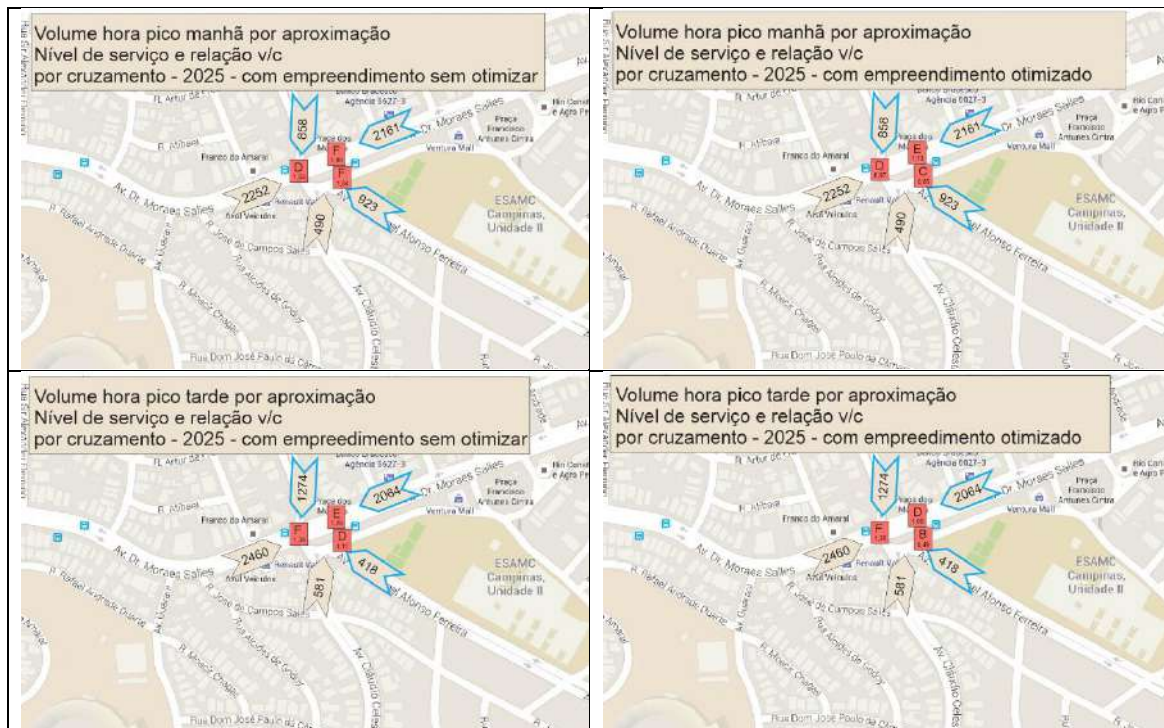




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Velocidades médias



Abaixo a programação semafórica simulada:
Pico manhã



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| NODE SETTINGS | | TIMING SETTINGS | | | | | | | | | | | | | |
|--------------------------|--------------------------|---------------------------|------|-----|-----|------|-----|------|-----|-----|-----|-----|------|-----|------|
| | | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR | NWR2 | PED | HOLD |
| Node # | 70 | Lanes and Sharing (IFRL) | | | | | | | | | | | | | |
| Zone | | Traffic Volume (vph) | | | | | | | | | | | | | |
| X East (m) | 905.5 | 0 | 1882 | 327 | 0 | 2230 | 0 | 65 | 658 | 112 | 0 | 0 | 0 | | |
| Y North (m) | -257.0 | Turn Type | | | | | | | | | | | | | |
| Z Elevation (m) | 0.0 | Permitted Phases | | | | | | | | | | | | | |
| Description | | Permitted Phases | | | | | | | | | | | | | |
| Control Type | Pr timed | Permitted Flashing Yellow | | | | | | | | | | | | | |
| Cycle Length (s) | 100.0 | Detector Phases | | | | | | | | | | | | | |
| Lock Timing | <input type="checkbox"/> | Switch Phase | | | | | | | | | | | | | |
| Optimize Cycle Length | Optimize | Leading Detector (m) | | | | | | | | | | | | | |
| Optimize Split | Optimize | Trailing Detector (m) | | | | | | | | | | | | | |
| Actuated Cycle(s) | 100.0 | Minimum Inital (s) | | | | | | | | | | | | | |
| Natural Cycle(s) | 30.0 | Minimum Split (s) | | | | | | | | | | | | | |
| Max v/c Ratio | 0.97 | Total Split (s) | | | | | | | | | | | | | |
| Intersection Delay (s) | 43.1 | Yellow Time (s) | | | | | | | | | | | | | |
| Intersection LOS | D | All-Red Time (s) | | | | | | | | | | | | | |
| ICU | 1.78 | Lost Time Adjust (s) | | | | | | | | | | | | | |
| ICU LOS | H | Lagging Phase? | | | | | | | | | | | | | |
| Offset (s) | 6.0 | Allow Lead/Lag Optimize? | | | | | | | | | | | | | |
| Referenced to | Begin of Green | Floral Mode | | | | | | | | | | | | | |
| Reference Phase | 4-8 - EBT wBT | Speed limit (km/h) | | | | | | | | | | | | | |
| Master Intersection | <input type="checkbox"/> | Actuated Elct. Green (s) | | | | | | | | | | | | | |
| Yield Point | Single | Actuated G/D Ratio | | | | | | | | | | | | | |
| Mandatory Stop On Yellow | <input type="checkbox"/> | Volume to Capacity Ratio | | | | | | | | | | | | | |
| | | Control Delay (s) | | | | | | | | | | | | | |
| | | Queue Delay (s) | | | | | | | | | | | | | |
| | | Total Delay (s) | | | | | | | | | | | | | |
| | | Level of Service | | | | | | | | | | | | | |
| | | Approach Delay (s) | | | | | | | | | | | | | |
| | | Approach LOS | | | | | | | | | | | | | |
| | | Queue Length 50th (m) | | | | | | | | | | | | | |
| | | Queue Length 95th (m) | | | | | | | | | | | | | |
| | | Slope (vph) | | | | | | | | | | | | | |
| | | Fuel Used (l/hr) | | | | | | | | | | | | | |
| | | Dilemma Vehicles (H/hr) | | | | | | | | | | | | | |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| NODE SETTINGS | | TIMING SETTINGS | | | | | | | | | | | | | |
|---------------------------|--------------------------|---------------------------|------|-----|-----|------|-----|------|-----|-----|-----|-----|------|-----|------|
| | | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER | SEF2 | PED | HOLD |
| Node # | 32 | Lanes and Sharing (#F/L) | | | | | | | | | | | | | |
| Zone | 0 | Traffic Volume (vph) | | | | | | | | | | | | | |
| X East (m) | 950.0 | 0 | 1955 | 0 | 0 | 1650 | 262 | 365 | 851 | 66 | 0 | 0 | 0 | 0 | 0 |
| Y North (m) | -245.5 | Turn Type | | | | | | | | | | | | | |
| Z Elevation (m) | 0.0 | Permitted Phases | | | | | | | | | | | | | |
| Description | | Permitted Phases | | | | | | | | | | | | | |
| Control Type | Primed | Permitted Flashing Yellow | | | | | | | | | | | | | |
| Cycle Length (s) | 100.0 | Detector Phases | | | | | | | | | | | | | |
| Lock Timings: | <input type="checkbox"/> | Switch Phase | | | | | | | | | | | | | |
| Optimize Cycle Length: | Optimize | Leading Detector (m) | | | | | | | | | | | | | |
| Optimize Split: | Optimize | Trailing Detector (m) | | | | | | | | | | | | | |
| Actuated Cycle(s) | 100.0 | Minimum Initial (s) | | | | | | | | | | | | | |
| Natural Cycle(s) | 100.0 | Minimum Split (s) | | | | | | | | | | | | | |
| Max v/c Ratio: | 1.13 | Total Split (s) | | | | | | | | | | | | | |
| Intersection Delay (s): | 75.1 | Yellow Time (s) | | | | | | | | | | | | | |
| Intersection LOS: | E | All-Red Time (s) | | | | | | | | | | | | | |
| ICU: | 1.78 | Lost Time Adjust (s) | | | | | | | | | | | | | |
| ICU LOS: | H | Lagging Phase? | | | | | | | | | | | | | |
| Offset (s): | 23.0 | Allow Lead/Lag Optimize? | | | | | | | | | | | | | |
| Referenced to: | Begin of Green | Recall Mode | | | | | | | | | | | | | |
| Reference Phase: | 4-8 - EBT wBT | Speed limit (km/h) | | | | | | | | | | | | | |
| Master Intersection: | <input type="checkbox"/> | Actuated Elct. Green (s) | | | | | | | | | | | | | |
| Yield Point: | Single | Actuated g/C Ratio | | | | | | | | | | | | | |
| Mandatory Stop On Yellow: | <input type="checkbox"/> | Volume to Capacity Ratio | | | | | | | | | | | | | |
| | | Control Delay (s) | | | | | | | | | | | | | |
| | | Queue Delay (s) | | | | | | | | | | | | | |
| | | Total Delay (s) | | | | | | | | | | | | | |
| | | Level of Service | | | | | | | | | | | | | |
| | | Approach Delay (s) | | | | | | | | | | | | | |
| | | Approach LOS | | | | | | | | | | | | | |
| | | Queue Length 50th (m) | | | | | | | | | | | | | |
| | | Queue Length 95th (m) | | | | | | | | | | | | | |
| | | Slope (vph) | | | | | | | | | | | | | |
| | | Fuel Used (l/hr) | | | | | | | | | | | | | |
| | | Delayed Vehicles (R/hr) | | | | | | | | | | | | | |

| NODE SETTINGS | | TIMING SETTINGS | | | | | | | | | | | | | |
|---------------------------|--------------------------|---------------------------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|------|
| | | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR | NWR2 | PED | HOLD |
| Node # | 33 | Lanes and Sharing (#F/L) | | | | | | | | | | | | | |
| Zone | 0 | Traffic Volume (vph) | | | | | | | | | | | | | |
| X East (m) | 979.1 | 427 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 761 | 56 | 0 | 0 |
| Y North (m) | -277.9 | Turn Type | | | | | | | | | | | | | |
| Z Elevation (m) | 0.0 | Permitted Phases | | | | | | | | | | | | | |
| Description | | Permitted Phases | | | | | | | | | | | | | |
| Control Type | Primed | Permitted Flashing Yellow | | | | | | | | | | | | | |
| Cycle Length (s) | 100.0 | Detector Phases | | | | | | | | | | | | | |
| Lock Timings: | <input type="checkbox"/> | Switch Phase | | | | | | | | | | | | | |
| Optimize Cycle Length: | Optimize | Leading Detector (m) | | | | | | | | | | | | | |
| Optimize Split: | Optimize | Trailing Detector (m) | | | | | | | | | | | | | |
| Actuated Cycle(s) | 100.0 | Minimum Initial (s) | | | | | | | | | | | | | |
| Natural Cycle(s) | 50.0 | Minimum Split (s) | | | | | | | | | | | | | |
| Max v/c Ratio: | 0.65 | Total Split (s) | | | | | | | | | | | | | |
| Intersection Delay (s): | 26.3 | Yellow Time (s) | | | | | | | | | | | | | |
| Intersection LOS: | C | All-Red Time (s) | | | | | | | | | | | | | |
| ICU: | 0.83 | Lost Time Adjust (s) | | | | | | | | | | | | | |
| ICU LOS: | B | Lagging Phase? | | | | | | | | | | | | | |
| Offset (s): | 31.0 | Allow Lead/Lag Optimize? | | | | | | | | | | | | | |
| Referenced to: | Begin of Green | Recall Mode | | | | | | | | | | | | | |
| Reference Phase: | 4 - EBT L | Speed limit (km/h) | | | | | | | | | | | | | |
| Master Intersection: | <input type="checkbox"/> | Actuated Elct. Green (s) | | | | | | | | | | | | | |
| Yield Point: | Single | Actuated g/C Ratio | | | | | | | | | | | | | |
| Mandatory Stop On Yellow: | <input type="checkbox"/> | Volume to Capacity Ratio | | | | | | | | | | | | | |
| | | Control Delay (s) | | | | | | | | | | | | | |
| | | Queue Delay (s) | | | | | | | | | | | | | |
| | | Total Delay (s) | | | | | | | | | | | | | |
| | | Level of Service | | | | | | | | | | | | | |
| | | Approach Delay (s) | | | | | | | | | | | | | |
| | | Approach LOS | | | | | | | | | | | | | |
| | | Queue Length 50th (m) | | | | | | | | | | | | | |
| | | Queue Length 95th (m) | | | | | | | | | | | | | |
| | | Slope (vph) | | | | | | | | | | | | | |
| | | Fuel Used (l/hr) | | | | | | | | | | | | | |
| | | Delayed Vehicles (R/hr) | | | | | | | | | | | | | |



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Pico Tarde

| NODE SETTINGS | | TIMING SETTINGS | | | | | | | | | | | | | | |
|--------------------------|-------------------------------------|---------------------------|-----|--------|-------|-----|-------|-----|--------|------|------|-----|-----|------|-----|------|
| Node # | 70 | Lanes and Sharing (#FL) | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SEL | SBR | NWL | NWR | NWR2 | PED | HOLD |
| Zone | | Traffic Volume (vph) | 0 | 1920 | 471 | 0 | 2120 | 0 | 171 | 904 | 86 | 0 | 0 | 0 | | |
| X East (m) | 905.5 | Turn Type | | | Perm | | | | Perm | Plx | Perm | | | | | |
| Y North (m) | -257.0 | Protected Phases | | 4 | | | 8 | | | 6 | | | | | | |
| Z Elevation (m) | 0.0 | Permitted Phases | | | 4 | | | | 6 | 6 | | | | | | |
| Description | | Permitted Flashing Yellow | | | | | | | | | | | | | | |
| Control Type | Pre timed | Detector Phases | | 4 | 4 | | 8 | | 6 | 6 | 6 | | | | | |
| Cycle Length (s) | 100.0 | Switch Phase | | 0 | 0 | | 0 | | 0 | 0 | 0 | | | | | |
| Lock Timings | <input type="checkbox"/> | Leading Detector (m) | | 10.0 | 2.0 | | 10.0 | | 2.0 | 2.0 | | | | | | |
| Optimize Cycle Length | Optimize | Trailing Detector (m) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | | | | | |
| Optimize Split | Optimize | Minimum Inital (s) | | 4.0 | 4.0 | | 4.0 | | 4.0 | 4.0 | 4.0 | | | | | |
| Actuated Cycle(s) | 100.0 | Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | | | | |
| Natural Cycle(s) | 150.0 | Total Split (s) | | 62.0 | 62.0 | | 62.0 | | 38.0 | 38.0 | 38.0 | | | | | |
| Max v/c Ratio | 1.26 | Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | | | | |
| Intersection Delay (s) | 91.7 | All-Rod Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | | | | |
| Intersection LOS | F | Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | | | |
| ICU | 1.73 | Lagging Phase? | | | | | | | | | | | | | | |
| ICU LOS | H | Allow Lead/Lag Optimize? | | | | | | | | | | | | | | |
| Offset (s) | 0.0 | Fiscal Mode | | Max | Max | | Max | | Max | Max | Max | | | | | |
| Referenced to | Begin of Green | Speed limit (km/h) | | 50 | | | 50 | | 50 | | 50 | | 50 | | | |
| Reference Phase | 4-8 - EBT WBT | Actuated Elct. Green (s) | | 58.0 | 58.0 | | 57.0 | | 33.0 | 33.0 | | | | | | |
| Master Intersection | <input checked="" type="checkbox"/> | Actuated g/C Ratio | | 0.88 | 0.58 | | 0.57 | | 0.33 | 0.33 | | | | | | |
| Yield Point | Single | Volume to Capacity Ratio | | 1.35 | 0.70 | | 0.91 | | 1.25 | 0.22 | | | | | | |
| Mandatory Stop On Yellow | <input type="checkbox"/> | Control Delay (s) | | 148.3 | 21.1 | | 10.3 | | 151.0 | 25.8 | | | | | | |
| | | Queue Delay (s) | | 0.8 | 0.0 | | 16.0 | | 0.2 | 0.0 | | | | | | |
| | | Total Delay (s) | | 146.8 | 21.1 | | 26.3 | | 151.2 | 25.8 | | | | | | |
| | | Level of Service | | F | C | | C | | F | C | | | | | | |
| | | Approach Delay (s) | | 122.3 | | | 28.3 | | 141.6 | | | | | | | |
| | | Approach LOS | | F | | | C | | F | | | | | | | |
| | | Queue Length 50th (m) | | ~322.7 | 81.8 | | 40.0 | | ~128.5 | 16.4 | | | | | | |
| | | Queue Length 95th (m) | | #349.5 | 120.6 | | #46.2 | | #209.2 | 29.1 | | | | | | |
| | | Slope (vph) | | 1572 | 337 | | 853 | | 963 | 68 | | | | | | |
| | | Fuel Used (l/hr) | | 286 | 22 | | 48 | | 165 | 4 | | | | | | |
| | | Orignal Vehicles (R/hr) | | 0 | 0 | | 0 | | 0 | 0 | | | | | | |

| NODE SETTINGS | | TIMING SETTINGS | | | | | | | | | | | | | | |
|--------------------------|--------------------------|---------------------------|-----|-------|-----|-----|--------|-----|-----|-----|------|--------|------|------|-----|------|
| Node # | 32 | Lanes and Sharing (#FL) | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR | PED | HOLD |
| Zone | 0 | Traffic Volume (vph) | 0 | 2121 | 0 | 0 | 1612 | 214 | 0 | 0 | 0 | 299 | 557 | 102 | | |
| X East (m) | 950.0 | Turn Type | | | | | | | | | | Perm | | Perm | | |
| Y North (m) | -245.5 | Protected Phases | | 4 | | | 8 | | | | | | | 2 | | |
| Z Elevation (m) | 0.0 | Permitted Phases | | | | | | | | | | 2 | | 2 | | |
| Description | | Permitted Flashing Yellow | | | | | | | | | | | | | | |
| Control Type | Pre timed | Detector Phases | | 4 | | | 8 | | | | | 2 | 2 | 2 | | |
| Cycle Length (s) | 100.0 | Switch Phase | | 0 | | | 0 | | | | 0 | 0 | 0 | | | |
| Lock Timings | <input type="checkbox"/> | Leading Detector (m) | | 10.0 | | | 10.0 | | | | 2.0 | 10.0 | 2.0 | | | |
| Optimize Cycle Length | Optimize | Trailing Detector (m) | | 0.0 | | | 0.0 | | | | 0.0 | 0.0 | 0.0 | | | |
| Optimize Split | Optimize | Minimum Inital (s) | | 4.0 | | | 4.0 | | | | 4.0 | 4.0 | 4.0 | | | |
| Actuated Cycle(s) | 100.0 | Minimum Split (s) | | 21.0 | | | 21.0 | | | | 21.0 | 21.0 | 21.0 | | | |
| Natural Cycle(s) | 80.0 | Total Split (s) | | 57.0 | | | 57.0 | | | | 43.0 | 43.0 | 43.0 | | | |
| Max v/c Ratio | 1.00 | Yellow Time (s) | | 4.0 | | | 4.0 | | | | 3.0 | 3.0 | 3.0 | | | |
| Intersection Delay (s) | 52.4 | All-Rod Time (s) | | 1.0 | | | 0.0 | | | | 2.0 | 2.0 | 2.0 | | | |
| Intersection LOS | D | Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| ICU | 1.73 | Lagging Phase? | | | | | | | | | | | | | | |
| ICU LOS | H | Allow Lead/Lag Optimize? | | | | | | | | | | | | | | |
| Offset (s) | 5.0 | Fiscal Mode | | Max | | | Max | | | | Max | Max | Max | | | |
| Referenced to | Begin of Green | Speed limit (km/h) | | 50 | | | 50 | | | | 50 | 50 | 50 | | | |
| Reference Phase | 4-8 - EBT WBT | Actuated Elct. Green (s) | | 52.0 | | | 53.0 | | | | 38.0 | 38.0 | 38.0 | | | |
| Master Intersection | <input type="checkbox"/> | Actuated g/C Ratio | | 0.52 | | | 0.53 | | | | 0.38 | 0.38 | 0.38 | | | |
| Yield Point | Single | Volume to Capacity Ratio | | 0.99 | | | 0.97 | | | | 0.52 | 1.00 | 0.21 | | | |
| Mandatory Stop On Yellow | <input type="checkbox"/> | Control Delay (s) | | 15.9 | | | 35.9 | | | | 22.5 | 61.3 | 18.2 | | | |
| | | Queue Delay (s) | | 39.7 | | | 0.0 | | | | 45.8 | 34.8 | 6.6 | | | |
| | | Total Delay (s) | | 55.7 | | | 35.9 | | | | 69.3 | 96.1 | 24.9 | | | |
| | | Level of Service | | E | | | D | | | | E | F | C | | | |
| | | Approach Delay (s) | | 55.7 | | | 35.9 | | | | | 80.2 | | | | |
| | | Approach LOS | | E | | | D | | | | | F | | | | |
| | | Queue Length 50th (m) | | 95.6 | | | 153.0 | | | | 38.7 | 137.8 | 14.0 | | | |
| | | Queue Length 95th (m) | | #40.0 | | | #195.4 | | | | 60.9 | #207.8 | 22.8 | | | |
| | | Slope (vph) | | 1495 | | | 1782 | | | | 209 | 486 | 55 | | | |
| | | Fuel Used (l/hr) | | 71 | | | 136 | | | | 11 | 40 | 3 | | | |
| | | Orignal Vehicles (R/hr) | | 0 | | | 0 | | | | 0 | 0 | 0 | | | |



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| NODE SETTINGS | | TIMING SETTINGS | | | | | | | | | | | | | |
|---------------------------|--------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR | PED | HOLD |
| Node # | 33 | Lanes and Sharing (IFRL) | | | | | | | | | | | | | |
| Zone | 0 | Traffic Volume (vph) | | | | | | | | | | | | | |
| X East (m) | 987.0 | 618 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 53 | | |
| Y North (m) | -277.5 | Turn Type | | | | | | | | | | | | | |
| Z Elevation (m) | 0.0 | Permitted Phases | | | | | | | | | | | | | |
| Description | | Permitted Phases | | | | | | | | | | | | | |
| Control Type | Pr timed | Permitted Flashing Yellow | | | | | | | | | | | | | |
| Cycle Length (s) | 100.0 | Detector Phases | | | | | | | | | | | | | |
| Lock Timings | <input type="checkbox"/> | Switch Phase | | | | | | | | | | | | | |
| Optimize Cycle Length | Optimize | Leading Detector (m) | | | | | | | | | | | | | |
| Optimize Split | Optimize | Trailing Detector (m) | | | | | | | | | | | | | |
| Actuated Cycle(s) | 100.0 | Minimum Inbal (s) | | | | | | | | | | | | | |
| Natural Cycle(s) | 45.0 | Minimum Split (s) | | | | | | | | | | | | | |
| Max v/c Ratio | 0.49 | Total Split (s) | | | | | | | | | | | | | |
| Intersection Delay (s) | 16.0 | Yellow Time (s) | | | | | | | | | | | | | |
| Intersection LOS | B | All-Red Time (s) | | | | | | | | | | | | | |
| ICU | 0.54 | Lost Time Adjust (s) | | | | | | | | | | | | | |
| ICU LOS | A | Lagging Phase? | | | | | | | | | | | | | |
| Offset (s) | 63.0 | Allow Lead/Lag Optimize? | | | | | | | | | | | | | |
| Referenced to: | Begin of Green | Flexal Mode | | | | | | | | | | | | | |
| Reference Phase | 4 - EBTL | Speed limit (km/h) | | | | | | | | | | | | | |
| Master Intersection: | <input type="checkbox"/> | Actuated Elict. Green (s) | | | | | | | | | | | | | |
| Yield Point: | Single | Actuated g/C Ratio | | | | | | | | | | | | | |
| Mandatory Stop On Yellow: | <input type="checkbox"/> | Volume to Capacity Ratio | | | | | | | | | | | | | |
| | | Control Delay (s) | | | | | | | | | | | | | |
| | | Queue Delay (s) | | | | | | | | | | | | | |
| | | Total Delay (s) | | | | | | | | | | | | | |
| | | Level of Service | | | | | | | | | | | | | |
| | | Approach Delay (s) | | | | | | | | | | | | | |
| | | Approach LOS | | | | | | | | | | | | | |
| | | Queue Length 50th (m) | | | | | | | | | | | | | |
| | | Queue Length 95th (m) | | | | | | | | | | | | | |
| | | Slope (vph) | | | | | | | | | | | | | |
| | | Fuel Used (l/hr) | | | | | | | | | | | | | |
| | | Dilemma Vehicles (R/h) | | | | | | | | | | | | | |

Afim de esclarecer a contribuição do empreendimento no local desta solicitação, segue abaixo as tabelas apresentadas às folhas 131 e 132 do Estudo de Tráfego, complementadas com a informação dos indicadores de qualidade de operação de tráfego para o ano de 2025 com a situação sem o empreendimento:



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

| HORA PICO MANHÃ | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------------------------------|------------------------------|-----------------------------------|----|--------------|------|----|-------------------------|------|----|-------------------------|------|--------|------------------------|----------------|------|---------------|------------------------|
| nó | via 1 | cruzamento | | | 2019 | | | 2025 sem empreendimento | | | 2025 com empreendimento | | | variação % dos atrasos | 2025 otimizado | | | variação % dos atrasos |
| | | via 2 | via 3 | NS | atraso | v/c | NS | atraso | v/c | NS | atraso | v/c | NS | | atraso | v/c | | |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | D | 42,8 | 0,9 | D | 51,6 | 1,02 | D | 53,3 | 1,03 | 24,5% | D | 43,1 | 0,97 | -19,1% | |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | F | 83,5 | 1,55 | F | 98,3 | 1,75 | F | 102,7 | 1,80 | 23,0% | E | 75,1 | 1,13 | -26,9% | |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | F | 195 | 1,63 | F | 249,8 | 1,84 | F | 240,9 | 1,84 | 23,5% | C | 26,3 | 0,65 | -89,1% | |
| Total complexo 3 | | | | | 321,3 | | | 399,7 | | | 396,9 | | | | 144,5 | | -63,6% | |
| HORA PICO ALMOÇO | | | | | | | | | | | | | | | | | | |
| nó | via 1 | cruzamento | | | 2019 | | | 2025 sem empreendimento | | | 2025 com empreendimento | | | variação % dos atrasos | 2025 otimizado | | | variação % dos atrasos |
| | | via 2 | via 3 | NS | atraso | v/c | NS | atraso | v/c | NS | atraso | v/c | NS | | atraso | v/c | | |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | B | 19,7 | 0,89 | D | 36,4 | 1,01 | | | | | | | | | |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | D | 41,7 | 1,3 | E | 62,9 | 1,47 | | | | | | | | | |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | F | 85,2 | 1,26 | F | 117,4 | 1,42 | | | | | | | | | |
| Total complexo 3 | | | | | 146,6 | | | 216,7 | | | | | | | | | | |
| HORA PICO TARDE | | | | | | | | | | | | | | | | | | |
| nó | via 1 | cruzamento | | | 2019 | | | 2025 sem empreendimento | | | 2025 com empreendimento | | | variação % dos atrasos | 2025 otimizado | | | variação % dos atrasos |
| | | via 2 | via 3 | NS | atraso | v/c | NS | atraso | v/c | NS | atraso | v/c | NS | | atraso | v/c | | |
| 70 | Av. Claudio Celestino Toledo Soares | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | D | 42 | 1,02 | E | 59,2 | 1,15 | F | 84,4 | 1,30 | 101,0% | F | 91,7 | 1,26 | 8,6% | |
| 32 | Av. Dr. Manoel Afonso Ferreira | Av. Dr. Moraes Salles | Av. Dr. Jesuino Marcondes Machado | D | 40,2 | 0,9 | D | 50,5 | 1,02 | E | 56,4 | 1,20 | 40,3% | D | 52,4 | 1,00 | -7,1% | |
| 33 | Av. Dr. Manoel Afonso Ferreira | Rua Me Maria Santa Margarida | | D | 40,5 | 0,98 | D | 54 | 1,11 | D | 45,3 | 1,11 | 11,9% | B | 16 | 0,49 | -64,7% | |
| Total complexo 3 | | | | | 122,7 | | | 163,7 | | | 186,1 | | | | 160,1 | | -14,0% | |

A proporção de aumento de volume veicular que o empreendimento representa no total do volume do complexo, segue abaixo:

| Volumes Complexo 3 | | 2019 | 2025 sem empreendimento | 2025 com empreendimento | % de aumento |
|--------------------|-------|------|-------------------------|-------------------------|--------------|
| Nós 70, 32 e 33 | Manhã | 5742 | 6489 | 6684 | 2,9% |
| | Tarde | 5599 | 6327 | 6797 | 6,9% |



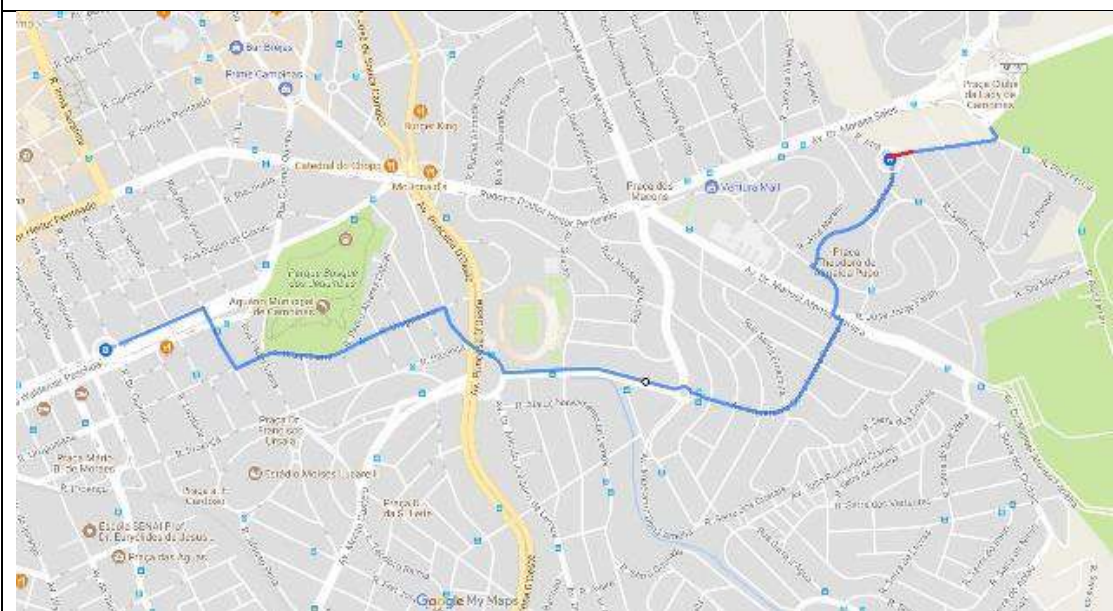
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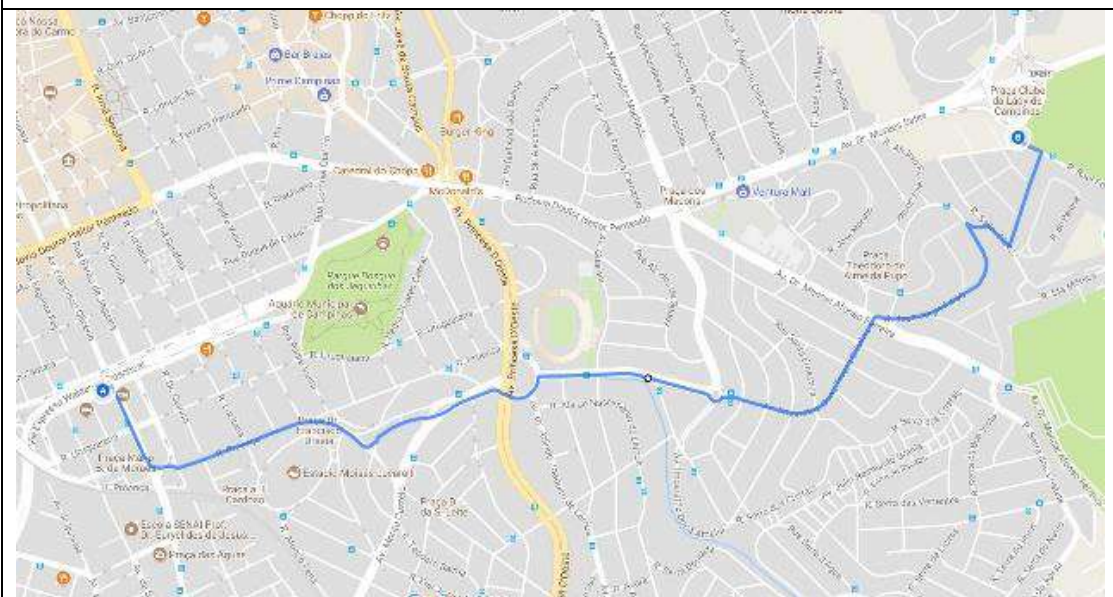
Portanto as medidas acima apresentadas reduzem em 63,6% os atrasos do cruzamento para o ano de 2025 pico manhã e em 14% os atrasos no pico tarde, com o empreendimento em operação total. O empreendimento da Edo Rocha Arquiteturas, irá gerar no ano de 2025 um incremento no volume de tráfego na hora pico da tarde de 6,7%, portanto de baixa magnitude em relação ao volume total.

Oficializando as solicitações de prolongamento da Rua Geraldo de Castro Andrade até a Rua Afrânio Ferreira Júnior, com transposição do córrego para facilitar o acesso dos bairros das regiões leste e sudeste (item 10), e a melhoria na transposição do córrego ligando a Rua Dr. Domingos Ademar Boldrini e Rua Salim Feres (item 11), entende-se que foi confirmada uma nova rota alternativa, onde a mesma poderá ser utilizada para acesso ao empreendimento.

Rota de saída



Rota de chegada



Esta rota sendo mais estruturada, pois servirá de acesso dos veículos provenientes da Rod. D. Pedro I e do Bairro de Sousas, caso haja pequenas adequações geométricas e semafóricas.



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Esta nova situação altera as rotas dos veículos provenientes da região Sul e Sudeste para a região Leste do empreendimento. De maneira conservadora, considera-se que esta nova rota poderá reduzir em 5% os volumes do complexo em análise, isto significa uma redução de 340 veículos na somatória do complexo, que poderá ser facilmente absorvida pelas medidas 10 e 11 solicitadas.

| 2025 com empreendimento variação % dos | | | | 2025 otimizado menos 5% | | | variação % |
|--|--------------|------|---------|-------------------------|------------|------|---------------|
| NS | atraso | v/c | atrasos | NS | atraso | v/c | dos atrasos |
| D | 53,3 | 1,03 | 24,5% | D | 37,6 | 0,95 | -29,5% |
| F | 102,7 | 1,80 | 23,0% | E | 66,1 | 1,1 | -35,6% |
| F | 240,9 | 1,84 | 23,5% | C | 23,3 | 0,63 | -90,3% |
| | 396,9 | | | | 127 | | -68,0% |

| 2025 com empreendimento variação % dos | | | | 2025 otimizado menos 5% | | | variação % |
|--|--------------|------|---------|-------------------------|--------------|------|---------------|
| NS | atraso | v/c | atrasos | NS | atraso | v/c | dos atrasos |
| F | 84,4 | 1,30 | 101,0% | E | 74,3 | 1,21 | -12,0% |
| E | 56,4 | 1,20 | 40,3% | D | 48,2 | 0,96 | -14,5% |
| D | 45,3 | 1,11 | 11,9% | B | 14,6 | 0,47 | -67,8% |
| | 186,1 | | | | 137,1 | | -26,3% |

O programa utilizado para a simulação de tráfego do relatório inicial do empreendimento da Edo Rochas Arquitetura foi Trafficware™ Synchro 6, que utilizou como base para o cálculo dos atrasos a versão 2000 do Highway Capacity Manual (HCM) que é a principal referência bibliográfica para estudos de capacidade viária no mundo.

Face o tempo decorrido a elaboração do relatório revisado em 2019, se baseou na versão Synchro Studio 8 que utiliza a versão do HCM 2010.

Abaixo segue comparativamente as reduções dos atrasos nas duas versões simuladas:

Versão Synchro 6 utilizada na versão inicial do relatório

| Atrasos Complexo 3 | | 2016 | 2022 sem empreendimento | 2022 com empreendimento | 2022 com empreendimento otimizado | variação % dos atrasos |
|--------------------|-------|-------|-------------------------|-------------------------|-----------------------------------|------------------------|
| Nós 70, 32 e 33 | Manhã | 491,2 | 582,1 | 588,9 | 498,1 | -15,4% |
| | Tarde | 233,1 | 352,3 | 424,6 | 309,5 | -27,1% |

Versão Synchro 8 utilizada na revisão de 2019

| Atrasos Complexo 3 | | 2019 | 2025 sem empreendimento | 2025 com empreendimento | 2025 com empreendimento otimizado | variação % dos atrasos |
|--------------------|-------|-------|-------------------------|-------------------------|-----------------------------------|------------------------|
| Nós 70, 32 e 33 | Manhã | 321,3 | 399,7 | 396,9 | 144,5 | -63,6% |
| | Tarde | 122,7 | 163,7 | 186,1 | 160,1 | -14,0% |

Os volumes para o pico da manhã também foram reduzidos comparando-se os anos em análise:

| Volumes Complexo 3 | | 2016 | 2019 | % de redução |
|--------------------|-------|------|------|--------------|
| Nós 70, 32 e 33 | Manhã | 6203 | 5742 | -8,0% |
| | Tarde | 5668 | 5599 | -1,2% |

Nota-se que os algoritmos de otimização semafórica foram mais eficientes para o período de maior volume de tráfego (pico manhã). Para estas situações de instabilidade de operações (congestionamento, filas) a operação do tráfego tende a um ritmo intermitente. Com a otimização, esta situação de aumento de capacidade e melhoria do fluxo, pode ser mais facilmente detectada com a diminuição relevante dos atrasos. Considerando a



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Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

eficiência na melhoria dos algoritmos utilizados na versão mais recente do programa e a variável atraso como parâmetro comparativo entre eles, constata-se uma majoração em 20% que demonstra comparativamente manter os parâmetros do relatório original.

O relatório de Estudo de Tráfego demonstra que o empreendimento da Edo Rocha Arquiteturas, com as medidas de: implantação de controladores semafóricos atuando em tempo real; prolongamento da Rua Geraldo de Castro Andrade até a Rua Afrânio Ferreira Júnior, com transposição do córrego para facilitar o acesso dos bairros das regiões leste e sudeste; melhoria na transposição do córrego ligando a Rua Dr. Domingos Ademar Boldrini e Rua Salim Feres, prevendo alargamento e construção de calçada de pedestres em ambos os lados, mitigam o impacto no cruzamento da Av. Dr. Moraes Salles com Av. Dr. Jesuíno Marcondes Machado e Av. Dr. Manoel Afonso Ferreira. Todas as simulações realizadas encontram-se no **Anexo 2 – Planilhas de Simulação**.

O presente estudo comprova a eficiência das medidas mitigadoras apresentadas, gerando desempenho operacional com eficácia superior à dinâmica atual da referida interseção, não se justificando, portanto a necessidade de implantação da passagem em desnível.

Bragança Paulista, 21 de novembro de 2019

Elaboração:

Eng. Cintia Aparecida Rossati Xavier

Coordenação Técnica:

Eng. Agenor Cremonese Júnior



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Anexo 1 – Relatório de Pesquisas



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Anexo 2 – Planilhas de Simulação



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Nota técnica de esclarecimento:

O programa utilizado para a simulação de tráfego do relatório inicial do empreendimento da Edo Rochas Arquitetura foi Trafficware™ Synchro 6, que utilizava como base para o cálculo dos atrasos a versão 2000 do Highway Capacity Manual (HCM) que é a principal referência bibliográfica para estudos de capacidade viária no mundo.

Face o tempo decorrido a elaboração do relatório revisado em 2019, ele se baseou na versão Synchro Studio 8 que utiliza a versão do HCM 2010.

Abaixo segue comparativamente as reduções dos atrasos nas duas versões simuladas:

| Atrasos Complexo 3 | | 2016 | 2022 sem empreendimento | 2022 com empreendimento | 2022 com empreendimento otimizado | variação % dos atrasos |
|--------------------|-------|-------|-------------------------|-------------------------|-----------------------------------|------------------------|
| Nós 70, 32 e 33 | Manhã | 491,2 | 582,1 | 588,9 | 498,1 | -15,4% |
| | Tarde | 233,1 | 352,3 | 424,6 | 309,5 | -27,1% |

| Atrasos Complexo 3 | | 2019 | 2025 sem empreendimento | 2025 com empreendimento | 2025 com empreendimento otimizado | variação % dos atrasos |
|--------------------|-------|-------|-------------------------|-------------------------|-----------------------------------|------------------------|
| Nós 70, 32 e 33 | Manhã | 321,3 | 399,7 | 396,9 | 144,5 | -63,6% |
| | Tarde | 122,7 | 163,7 | 186,1 | 160,1 | -14,0% |

*-Variação dos atrasos comparativamente entre os anos de ocupação plena sem otimização da rede e com otimização.

Os volumes para o pico da manhã também foram reduzidos comparando-se os anos em análise:

| Volumes Complexo 3 | | 2016 | 2019 | % de redução |
|--------------------|-------|------|------|--------------|
| Nós 70, 32 e 33 | Manhã | 6203 | 5742 | -8,0% |
| | Tarde | 5668 | 5599 | -1,2% |

Nota-se que os algoritmos de otimização semafórica foram mais eficientes para o período de maior volume de tráfego (pico manhã). Para estas situações de instabilidade de operações (congestionamento, filas) a operação do tráfego tende a um ritmo intermitente. Com a otimização, esta situação de aumento de capacidade e melhoria do fluxo, pode ser mais facilmente detectada com a diminuição relevante dos atrasos.

MANHÃ

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 8 | 0 | 1 | 0 | 9 | 11 | |
| 07:15 AS 07:30 | 11 | 0 | 0 | 0 | 11 | 11 | |
| 07:30 AS 07:45 | 12 | 0 | 0 | 0 | 12 | 12 | |
| 07:45 AS 08:00 | 19 | 0 | 0 | 0 | 19 | 19 | 53 |
| 08:00 AS 08:15 | 19 | 0 | 0 | 0 | 19 | 19 | 61 |
| 08:15 AS 08:30 | 30 | 0 | 2 | 0 | 32 | 35 | 85 |
| 08:30 AS 08:45 | 29 | 0 | 1 | 0 | 30 | 32 | 105 |
| 08:45 AS 09:00 | 24 | 0 | 0 | 0 | 24 | 24 | 110 |
| 09:00 AS 09:15 | 28 | 0 | 1 | 0 | 29 | 31 | 121 |
| 09:15 AS 09:30 | 23 | 0 | 1 | 0 | 24 | 26 | 112 |
| 09:30 AS 09:45 | 28 | 0 | 4 | 0 | 32 | 38 | 118 |
| 09:45 AS 10:00 | 30 | 0 | 1 | 0 | 31 | 33 | 127 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 95 | 0 | 1 | 0 | 96 | 98 | |
| 07:15 AS 07:30 | 153 | 0 | 1 | 1 | 155 | 158 | |
| 07:30 AS 07:45 | 111 | 0 | 0 | 0 | 111 | 111 | |
| 07:45 AS 08:00 | 108 | 0 | 2 | 1 | 111 | 115 | 481 |
| 08:00 AS 08:15 | 106 | 0 | 2 | 2 | 110 | 115 | 499 |
| 08:15 AS 08:30 | 131 | 0 | 2 | 0 | 133 | 136 | 477 |
| 08:30 AS 08:45 | 93 | 0 | 1 | 0 | 94 | 96 | 462 |
| 08:45 AS 09:00 | 146 | 0 | 3 | 0 | 149 | 154 | 500 |
| 09:00 AS 09:15 | 145 | 0 | 0 | 0 | 145 | 145 | 530 |
| 09:15 AS 09:30 | 161 | 0 | 5 | 2 | 168 | 178 | 572 |
| 09:30 AS 09:45 | 123 | 0 | 4 | 0 | 127 | 133 | 609 |
| 09:45 AS 10:00 | 99 | 0 | 2 | 0 | 101 | 104 | 560 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 17 | 0 | 0 | 0 | 17 | 17 | |
| 07:15 AS 07:30 | 23 | 0 | 0 | 0 | 23 | 23 | |
| 07:30 AS 07:45 | 21 | 0 | 0 | 0 | 21 | 21 | |
| 07:45 AS 08:00 | 28 | 0 | 0 | 0 | 28 | 28 | 89 |
| 08:00 AS 08:15 | 34 | 0 | 0 | 0 | 34 | 34 | 106 |
| 08:15 AS 08:30 | 38 | 0 | 1 | 1 | 40 | 43 | 126 |
| 08:30 AS 08:45 | 37 | 0 | 0 | 0 | 37 | 37 | 142 |
| 08:45 AS 09:00 | 42 | 0 | 2 | 0 | 44 | 47 | 161 |
| 09:00 AS 09:15 | 31 | 0 | 2 | 1 | 34 | 38 | 165 |
| 09:15 AS 09:30 | 39 | 0 | 1 | 0 | 40 | 42 | 164 |
| 09:30 AS 09:45 | 36 | 0 | 1 | 0 | 37 | 39 | 165 |
| 09:45 AS 10:00 | 34 | 0 | 0 | 0 | 34 | 34 | 152 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 391 | 0 | 2 | 13 | 406 | 422 | |
| 07:15 AS 07:30 | 464 | 0 | 2 | 8 | 474 | 485 | |
| 07:30 AS 07:45 | 535 | 0 | 9 | 10 | 554 | 578 | |
| 07:45 AS 08:00 | 438 | 0 | 6 | 18 | 462 | 489 | 1.974 |
| 08:00 AS 08:15 | 435 | 0 | 10 | 13 | 458 | 486 | 2.038 |
| 08:15 AS 08:30 | 419 | 0 | 6 | 6 | 431 | 446 | 1.999 |
| 08:30 AS 08:45 | 378 | 0 | 4 | 11 | 393 | 410 | 1.831 |
| 08:45 AS 09:00 | 409 | 0 | 7 | 9 | 425 | 445 | 1.787 |
| 09:00 AS 09:15 | 375 | 0 | 6 | 8 | 389 | 406 | 1.707 |
| 09:15 AS 09:30 | 344 | 0 | 10 | 6 | 360 | 381 | 1.642 |
| 09:30 AS 09:45 | 343 | 0 | 14 | 8 | 365 | 394 | 1.626 |
| 09:45 AS 10:00 | 322 | 0 | 11 | 6 | 339 | 362 | 1.543 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 354 | 0 | 5 | 14 | 373 | 395 | |
| 07:15 AS 07:30 | 364 | 0 | 8 | 11 | 383 | 406 | |
| 07:30 AS 07:45 | 410 | 0 | 9 | 17 | 436 | 467 | |
| 07:45 AS 08:00 | 396 | 0 | 11 | 11 | 418 | 446 | 1.713 |
| 08:00 AS 08:15 | 360 | 0 | 10 | 10 | 380 | 405 | 1.723 |
| 08:15 AS 08:30 | 319 | 0 | 6 | 10 | 335 | 354 | 1.671 |
| 08:30 AS 08:45 | 306 | 0 | 8 | 13 | 327 | 352 | 1.557 |
| 08:45 AS 09:00 | 315 | 0 | 14 | 6 | 335 | 362 | 1.473 |
| 09:00 AS 09:15 | 317 | 0 | 14 | 12 | 343 | 376 | 1.444 |
| 09:15 AS 09:30 | 234 | 0 | 9 | 4 | 247 | 265 | 1.355 |
| 09:30 AS 09:45 | 272 | 0 | 8 | 8 | 288 | 308 | 1.311 |
| 09:45 AS 10:00 | 267 | 0 | 8 | 5 | 280 | 297 | 1.246 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 110 | 0 | 1 | 1 | 112 | 115 | |
| 07:15 AS 07:30 | 81 | 0 | 0 | 3 | 84 | 87 | |
| 07:30 AS 07:45 | 89 | 0 | 0 | 0 | 89 | 89 | |
| 07:45 AS 08:00 | 78 | 0 | 1 | 0 | 79 | 81 | 371 |
| 08:00 AS 08:15 | 100 | 0 | 1 | 0 | 101 | 103 | 359 |
| 08:15 AS 08:30 | 92 | 0 | 3 | 0 | 95 | 100 | 372 |
| 08:30 AS 08:45 | 90 | 0 | 1 | 0 | 91 | 93 | 375 |
| 08:45 AS 09:00 | 134 | 0 | 2 | 0 | 136 | 139 | 434 |
| 09:00 AS 09:15 | 124 | 0 | 1 | 0 | 125 | 127 | 458 |
| 09:15 AS 09:30 | 99 | 0 | 4 | 1 | 104 | 111 | 469 |
| 09:30 AS 09:45 | 101 | 0 | 2 | 0 | 103 | 106 | 483 |
| 09:45 AS 10:00 | 87 | 0 | 2 | 0 | 89 | 92 | 436 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 63 | 0 | 0 | 0 | 63 | 63 | |
| 07:15 AS 07:30 | 66 | 0 | 0 | 0 | 66 | 66 | |
| 07:30 AS 07:45 | 66 | 0 | 0 | 0 | 66 | 66 | |
| 07:45 AS 08:00 | 60 | 0 | 1 | 0 | 61 | 63 | 258 |
| 08:00 AS 08:15 | 64 | 0 | 0 | 0 | 64 | 64 | 259 |
| 08:15 AS 08:30 | 66 | 0 | 2 | 0 | 68 | 71 | 264 |
| 08:30 AS 08:45 | 63 | 0 | 0 | 0 | 63 | 63 | 261 |
| 08:45 AS 09:00 | 69 | 0 | 0 | 0 | 69 | 69 | 267 |
| 09:00 AS 09:15 | 61 | 0 | 0 | 0 | 61 | 61 | 264 |
| 09:15 AS 09:30 | 59 | 0 | 1 | 0 | 60 | 62 | 255 |
| 09:30 AS 09:45 | 55 | 0 | 2 | 0 | 57 | 60 | 252 |
| 09:45 AS 10:00 | 52 | 0 | 1 | 0 | 53 | 55 | 237 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 312 | 0 | 2 | 13 | 327 | 343 | |
| 07:15 AS 07:30 | 372 | 0 | 1 | 8 | 381 | 391 | |
| 07:30 AS 07:45 | 466 | 0 | 8 | 10 | 484 | 506 | |
| 07:45 AS 08:00 | 367 | 0 | 6 | 18 | 391 | 418 | 1.658 |
| 08:00 AS 08:15 | 383 | 0 | 10 | 13 | 406 | 434 | 1.749 |
| 08:15 AS 08:30 | 358 | 0 | 6 | 6 | 370 | 385 | 1.743 |
| 08:30 AS 08:45 | 326 | 0 | 4 | 11 | 341 | 358 | 1.595 |
| 08:45 AS 09:00 | 357 | 0 | 6 | 9 | 372 | 390 | 1.567 |
| 09:00 AS 09:15 | 321 | 0 | 6 | 8 | 335 | 352 | 1.485 |
| 09:15 AS 09:30 | 301 | 0 | 10 | 6 | 317 | 338 | 1.438 |
| 09:30 AS 09:45 | 286 | 0 | 13 | 8 | 307 | 335 | 1.415 |
| 09:45 AS 10:00 | 283 | 0 | 9 | 6 | 298 | 318 | 1.342 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 114 | 0 | 1 | 1 | 116 | 119 | |
| 07:15 AS 07:30 | 144 | 0 | 2 | 3 | 149 | 155 | |
| 07:30 AS 07:45 | 174 | 0 | 6 | 1 | 181 | 191 | |
| 07:45 AS 08:00 | 219 | 0 | 0 | 0 | 219 | 219 | 684 |
| 08:00 AS 08:15 | 188 | 0 | 2 | 1 | 191 | 195 | 760 |
| 08:15 AS 08:30 | 179 | 0 | 1 | 0 | 180 | 182 | 787 |
| 08:30 AS 08:45 | 177 | 0 | 4 | 0 | 181 | 187 | 783 |
| 08:45 AS 09:00 | 200 | 0 | 1 | 0 | 201 | 203 | 766 |
| 09:00 AS 09:15 | 145 | 0 | 1 | 0 | 146 | 148 | 719 |
| 09:15 AS 09:30 | 106 | 0 | 0 | 0 | 106 | 106 | 643 |
| 09:30 AS 09:45 | 100 | 0 | 3 | 0 | 103 | 108 | 564 |
| 09:45 AS 10:00 | 119 | 0 | 2 | 0 | 121 | 124 | 485 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 25 | 0 | 0 | 0 | 25 | 25 | |
| 07:15 AS 07:30 | 18 | 0 | 1 | 0 | 19 | 21 | |
| 07:30 AS 07:45 | 12 | 0 | 1 | 2 | 15 | 19 | |
| 07:45 AS 08:00 | 14 | 0 | 0 | 0 | 14 | 14 | 78 |
| 08:00 AS 08:15 | 8 | 0 | 0 | 0 | 8 | 8 | 61 |
| 08:15 AS 08:30 | 18 | 0 | 0 | 0 | 18 | 18 | 59 |
| 08:30 AS 08:45 | 17 | 0 | 0 | 0 | 17 | 17 | 57 |
| 08:45 AS 09:00 | 13 | 0 | 1 | 0 | 14 | 16 | 59 |
| 09:00 AS 09:15 | 11 | 0 | 3 | 1 | 15 | 21 | 71 |
| 09:15 AS 09:30 | 18 | 0 | 1 | 0 | 19 | 21 | 74 |
| 09:30 AS 09:45 | 18 | 0 | 1 | 0 | 19 | 21 | 77 |
| 09:45 AS 10:00 | 14 | 0 | 1 | 0 | 15 | 17 | 78 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 79 | 0 | 0 | 0 | 79 | 79 | |
| 07:15 AS 07:30 | 92 | 0 | 1 | 0 | 93 | 95 | |
| 07:30 AS 07:45 | 69 | 0 | 1 | 0 | 70 | 72 | |
| 07:45 AS 08:00 | 71 | 0 | 0 | 0 | 71 | 71 | 316 |
| 08:00 AS 08:15 | 52 | 0 | 0 | 0 | 52 | 52 | 289 |
| 08:15 AS 08:30 | 61 | 0 | 0 | 0 | 61 | 61 | 256 |
| 08:30 AS 08:45 | 52 | 0 | 0 | 0 | 52 | 52 | 236 |
| 08:45 AS 09:00 | 52 | 0 | 1 | 0 | 53 | 55 | 220 |
| 09:00 AS 09:15 | 54 | 0 | 0 | 0 | 54 | 54 | 222 |
| 09:15 AS 09:30 | 43 | 0 | 0 | 0 | 43 | 43 | 204 |
| 09:30 AS 09:45 | 57 | 0 | 1 | 0 | 58 | 60 | 211 |
| 09:45 AS 10:00 | 39 | 0 | 2 | 0 | 41 | 44 | 201 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 362 | 0 | 6 | 14 | 382 | 405 | |
| 07:15 AS 07:30 | 375 | 0 | 8 | 11 | 394 | 417 | |
| 07:30 AS 07:45 | 422 | 0 | 9 | 17 | 448 | 479 | |
| 07:45 AS 08:00 | 415 | 0 | 11 | 11 | 437 | 465 | 1.765 |
| 08:00 AS 08:15 | 379 | 0 | 10 | 10 | 399 | 424 | 1.784 |
| 08:15 AS 08:30 | 349 | 0 | 8 | 10 | 367 | 389 | 1.756 |
| 08:30 AS 08:45 | 335 | 0 | 9 | 13 | 357 | 384 | 1.661 |
| 08:45 AS 09:00 | 339 | 0 | 14 | 6 | 359 | 386 | 1.583 |
| 09:00 AS 09:15 | 345 | 0 | 15 | 12 | 372 | 407 | 1.565 |
| 09:15 AS 09:30 | 257 | 0 | 10 | 4 | 271 | 290 | 1.466 |
| 09:30 AS 09:45 | 300 | 0 | 12 | 8 | 320 | 346 | 1.429 |
| 09:45 AS 10:00 | 297 | 0 | 9 | 5 | 311 | 330 | 1.372 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 155 | 0 | 1 | 1 | 157 | 160 | |
| 07:15 AS 07:30 | 184 | 0 | 4 | 3 | 191 | 200 | |
| 07:30 AS 07:45 | 184 | 0 | 8 | 2 | 194 | 208 | |
| 07:45 AS 08:00 | 217 | 0 | 0 | 0 | 217 | 217 | 785 |
| 08:00 AS 08:15 | 158 | 0 | 2 | 1 | 161 | 165 | 790 |
| 08:15 AS 08:30 | 157 | 0 | 1 | 0 | 158 | 160 | 750 |
| 08:30 AS 08:45 | 123 | 0 | 4 | 0 | 127 | 133 | 675 |
| 08:45 AS 09:00 | 144 | 0 | 3 | 0 | 147 | 152 | 609 |
| 09:00 AS 09:15 | 105 | 0 | 3 | 0 | 108 | 113 | 557 |
| 09:15 AS 09:30 | 77 | 0 | 0 | 0 | 77 | 77 | 474 |
| 09:30 AS 09:45 | 96 | 0 | 5 | 0 | 101 | 109 | 450 |
| 09:45 AS 10:00 | 97 | 0 | 3 | 0 | 100 | 105 | 403 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 15 | 0 | 0 | 0 | 15 | 15 | |
| 07:15 AS 07:30 | 20 | 0 | 0 | 0 | 20 | 20 | |
| 07:30 AS 07:45 | 6 | 0 | 0 | 0 | 6 | 6 | |
| 07:45 AS 08:00 | 11 | 0 | 0 | 0 | 11 | 11 | 52 |
| 08:00 AS 08:15 | 8 | 0 | 0 | 0 | 8 | 8 | 45 |
| 08:15 AS 08:30 | 7 | 0 | 0 | 0 | 7 | 7 | 32 |
| 08:30 AS 08:45 | 11 | 0 | 0 | 0 | 11 | 11 | 37 |
| 08:45 AS 09:00 | 11 | 0 | 0 | 0 | 11 | 11 | 37 |
| 09:00 AS 09:15 | 4 | 0 | 0 | 0 | 4 | 4 | 33 |
| 09:15 AS 09:30 | 12 | 0 | 0 | 0 | 12 | 12 | 38 |
| 09:30 AS 09:45 | 14 | 0 | 0 | 0 | 14 | 14 | 41 |
| 09:45 AS 10:00 | 5 | 0 | 1 | 0 | 6 | 8 | 38 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 63 | 0 | 0 | 0 | 63 | 63 | |
| 07:15 AS 07:30 | 70 | 0 | 0 | 0 | 70 | 70 | |
| 07:30 AS 07:45 | 71 | 0 | 0 | 1 | 72 | 73 | |
| 07:45 AS 08:00 | 87 | 0 | 0 | 0 | 87 | 87 | 293 |
| 08:00 AS 08:15 | 90 | 0 | 0 | 0 | 90 | 90 | 320 |
| 08:15 AS 08:30 | 101 | 0 | 0 | 0 | 101 | 101 | 351 |
| 08:30 AS 08:45 | 123 | 0 | 1 | 0 | 124 | 126 | 404 |
| 08:45 AS 09:00 | 121 | 0 | 0 | 0 | 121 | 121 | 438 |
| 09:00 AS 09:15 | 105 | 0 | 1 | 0 | 106 | 108 | 455 |
| 09:15 AS 09:30 | 90 | 0 | 1 | 0 | 91 | 93 | 447 |
| 09:30 AS 09:45 | 79 | 0 | 0 | 0 | 79 | 79 | 400 |
| 09:45 AS 10:00 | 75 | 0 | 0 | 0 | 75 | 75 | 354 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 119 | 0 | 0 | 0 | 119 | 119 | |
| 07:15 AS 07:30 | 67 | 0 | 1 | 1 | 69 | 72 | |
| 07:30 AS 07:45 | 62 | 0 | 2 | 1 | 65 | 69 | |
| 07:45 AS 08:00 | 48 | 0 | 1 | 1 | 50 | 53 | 312 |
| 08:00 AS 08:15 | 61 | 0 | 0 | 0 | 61 | 61 | 254 |
| 08:15 AS 08:30 | 30 | 0 | 2 | 0 | 32 | 35 | 218 |
| 08:30 AS 08:45 | 40 | 0 | 1 | 0 | 41 | 43 | 191 |
| 08:45 AS 09:00 | 38 | 0 | 2 | 0 | 40 | 43 | 182 |
| 09:00 AS 09:15 | 40 | 0 | 1 | 0 | 41 | 43 | 163 |
| 09:15 AS 09:30 | 43 | 0 | 2 | 0 | 45 | 48 | 176 |
| 09:30 AS 09:45 | 47 | 0 | 2 | 0 | 49 | 52 | 186 |
| 09:45 AS 10:00 | 26 | 0 | 2 | 0 | 28 | 31 | 174 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 33 | 0 | 1 | 2 | 36 | 40 | |
| 07:15 AS 07:30 | 74 | 0 | 2 | 4 | 80 | 87 | |
| 07:30 AS 07:45 | 80 | 0 | 2 | 0 | 82 | 85 | |
| 07:45 AS 08:00 | 71 | 0 | 0 | 0 | 71 | 71 | 283 |
| 08:00 AS 08:15 | 70 | 0 | 2 | 2 | 74 | 79 | 322 |
| 08:15 AS 08:30 | 63 | 0 | 0 | 0 | 63 | 63 | 298 |
| 08:30 AS 08:45 | 54 | 0 | 4 | 0 | 58 | 64 | 277 |
| 08:45 AS 09:00 | 79 | 0 | 2 | 0 | 81 | 84 | 290 |
| 09:00 AS 09:15 | 111 | 0 | 3 | 2 | 116 | 123 | 334 |
| 09:15 AS 09:30 | 54 | 0 | 1 | 2 | 57 | 61 | 331 |
| 09:30 AS 09:45 | 69 | 0 | 3 | 0 | 72 | 77 | 344 |
| 09:45 AS 10:00 | 70 | 0 | 7 | 0 | 77 | 88 | 347 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 129 | 0 | 0 | 2 | 131 | 133 | |
| 07:15 AS 07:30 | 133 | 0 | 1 | 3 | 137 | 142 | |
| 07:30 AS 07:45 | 116 | 0 | 0 | 0 | 116 | 116 | |
| 07:45 AS 08:00 | 104 | 0 | 1 | 0 | 105 | 107 | 497 |
| 08:00 AS 08:15 | 131 | 0 | 2 | 2 | 135 | 140 | 504 |
| 08:15 AS 08:30 | 130 | 0 | 1 | 0 | 131 | 133 | 495 |
| 08:30 AS 08:45 | 124 | 0 | 2 | 0 | 126 | 129 | 508 |
| 08:45 AS 09:00 | 143 | 0 | 2 | 0 | 145 | 148 | 550 |
| 09:00 AS 09:15 | 169 | 0 | 4 | 2 | 175 | 183 | 593 |
| 09:15 AS 09:30 | 124 | 0 | 2 | 2 | 128 | 133 | 593 |
| 09:30 AS 09:45 | 126 | 0 | 2 | 0 | 128 | 131 | 595 |
| 09:45 AS 10:00 | 107 | 0 | 6 | 0 | 113 | 122 | 569 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 86 | 0 | 1 | 0 | 87 | 89 | |
| 07:15 AS 07:30 | 78 | 0 | 2 | 2 | 82 | 87 | |
| 07:30 AS 07:45 | 97 | 0 | 4 | 2 | 103 | 111 | |
| 07:45 AS 08:00 | 102 | 0 | 0 | 0 | 102 | 102 | 389 |
| 08:00 AS 08:15 | 90 | 0 | 0 | 0 | 90 | 90 | 390 |
| 08:15 AS 08:30 | 64 | 0 | 0 | 0 | 64 | 64 | 367 |
| 08:30 AS 08:45 | 93 | 0 | 4 | 0 | 97 | 103 | 359 |
| 08:45 AS 09:00 | 95 | 0 | 2 | 0 | 97 | 100 | 357 |
| 09:00 AS 09:15 | 87 | 0 | 1 | 0 | 88 | 90 | 357 |
| 09:15 AS 09:30 | 63 | 0 | 2 | 0 | 65 | 68 | 361 |
| 09:30 AS 09:45 | 69 | 0 | 3 | 0 | 72 | 77 | 334 |
| 09:45 AS 10:00 | 64 | 0 | 3 | 0 | 67 | 72 | 306 |

ALMOÇO

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 37 | 0 | 1 | 0 | 38 | 40 | |
| 11:15 AS 11:30 | 33 | 0 | 1 | 0 | 34 | 36 | |
| 11:30 AS 11:45 | 30 | 0 | 1 | 1 | 32 | 35 | |
| 11:45 AS 12:00 | 44 | 0 | 1 | 0 | 45 | 47 | 156 |
| 12:00 AS 12:15 | 42 | 0 | 0 | 0 | 42 | 42 | 159 |
| 12:15 AS 12:30 | 38 | 0 | 0 | 0 | 38 | 38 | 161 |
| 12:30 AS 12:45 | 43 | 0 | 0 | 0 | 43 | 43 | 170 |
| 12:45 AS 13:00 | 50 | 0 | 0 | 0 | 50 | 50 | 173 |
| 13:00 AS 13:15 | 37 | 0 | 1 | 0 | 38 | 40 | 171 |
| 13:15 AS 13:30 | 34 | 0 | 0 | 0 | 34 | 34 | 167 |
| 13:30 AS 13:45 | 20 | 0 | 1 | 0 | 21 | 23 | 146 |
| 13:45 AS 14:00 | 38 | 0 | 0 | 0 | 38 | 38 | 134 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 109 | 0 | 0 | 0 | 109 | 109 | |
| 11:15 AS 11:30 | 99 | 0 | 2 | 0 | 101 | 104 | |
| 11:30 AS 11:45 | 11 | 0 | 1 | 0 | 12 | 14 | |
| 11:45 AS 12:00 | 105 | 0 | 1 | 0 | 106 | 108 | 334 |
| 12:00 AS 12:15 | 147 | 0 | 0 | 1 | 148 | 149 | 374 |
| 12:15 AS 12:30 | 164 | 0 | 1 | 0 | 165 | 167 | 437 |
| 12:30 AS 12:45 | 132 | 0 | 2 | 0 | 134 | 137 | 560 |
| 12:45 AS 13:00 | 129 | 0 | 0 | 1 | 130 | 131 | 584 |
| 13:00 AS 13:15 | 117 | 0 | 2 | 0 | 119 | 122 | 557 |
| 13:15 AS 13:30 | 115 | 0 | 1 | 1 | 117 | 120 | 510 |
| 13:30 AS 13:45 | 118 | 0 | 2 | 0 | 120 | 123 | 496 |
| 13:45 AS 14:00 | 121 | 0 | 1 | 2 | 124 | 128 | 492 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 49 | 0 | 1 | 0 | 50 | 52 | |
| 11:15 AS 11:30 | 33 | 0 | 1 | 0 | 34 | 36 | |
| 11:30 AS 11:45 | 46 | 0 | 0 | 0 | 46 | 46 | |
| 11:45 AS 12:00 | 40 | 0 | 1 | 0 | 41 | 43 | 176 |
| 12:00 AS 12:15 | 47 | 0 | 0 | 0 | 47 | 47 | 171 |
| 12:15 AS 12:30 | 35 | 0 | 1 | 0 | 36 | 38 | 173 |
| 12:30 AS 12:45 | 33 | 0 | 0 | 0 | 33 | 33 | 160 |
| 12:45 AS 13:00 | 34 | 0 | 0 | 0 | 34 | 34 | 152 |
| 13:00 AS 13:15 | 37 | 0 | 0 | 0 | 37 | 37 | 142 |
| 13:15 AS 13:30 | 34 | 0 | 0 | 0 | 34 | 34 | 138 |
| 13:30 AS 13:45 | 42 | 0 | 1 | 0 | 43 | 45 | 150 |
| 13:45 AS 14:00 | 39 | 0 | 0 | 0 | 39 | 39 | 155 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 310 | 0 | 7 | 5 | 322 | 338 | |
| 11:15 AS 11:30 | 258 | 0 | 13 | 4 | 275 | 299 | |
| 11:30 AS 11:45 | 289 | 0 | 10 | 7 | 306 | 328 | |
| 11:45 AS 12:00 | 310 | 0 | 12 | 5 | 327 | 350 | 1.314 |
| 12:00 AS 12:15 | 322 | 0 | 8 | 6 | 336 | 354 | 1.331 |
| 12:15 AS 12:30 | 305 | 0 | 7 | 5 | 317 | 333 | 1.365 |
| 12:30 AS 12:45 | 348 | 0 | 8 | 7 | 363 | 382 | 1.419 |
| 12:45 AS 13:00 | 311 | 0 | 6 | 7 | 324 | 340 | 1.409 |
| 13:00 AS 13:15 | 345 | 0 | 7 | 2 | 354 | 367 | 1.421 |
| 13:15 AS 13:30 | 358 | 0 | 14 | 7 | 379 | 407 | 1.496 |
| 13:30 AS 13:45 | 333 | 0 | 7 | 9 | 349 | 369 | 1.482 |
| 13:45 AS 14:00 | 342 | 0 | 9 | 5 | 356 | 375 | 1.517 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 290 | 0 | 14 | 6 | 310 | 337 | |
| 11:15 AS 11:30 | 256 | 0 | 11 | 7 | 274 | 298 | |
| 11:30 AS 11:45 | 257 | 0 | 3 | 4 | 264 | 273 | |
| 11:45 AS 12:00 | 273 | 0 | 6 | 6 | 285 | 300 | 1.207 |
| 12:00 AS 12:15 | 355 | 0 | 5 | 3 | 363 | 374 | 1.244 |
| 12:15 AS 12:30 | 370 | 0 | 9 | 10 | 389 | 413 | 1.359 |
| 12:30 AS 12:45 | 334 | 0 | 6 | 8 | 348 | 365 | 1.451 |
| 12:45 AS 13:00 | 418 | 0 | 7 | 7 | 432 | 450 | 1.601 |
| 13:00 AS 13:15 | 310 | 0 | 6 | 5 | 321 | 335 | 1.562 |
| 13:15 AS 13:30 | 336 | 0 | 5 | 5 | 346 | 359 | 1.508 |
| 13:30 AS 13:45 | 278 | 0 | 7 | 5 | 290 | 306 | 1.449 |
| 13:45 AS 14:00 | 299 | 0 | 6 | 8 | 313 | 330 | 1.329 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 103 | 0 | 0 | 0 | 103 | 103 | |
| 11:15 AS 11:30 | 99 | 0 | 0 | 0 | 99 | 99 | |
| 11:30 AS 11:45 | 102 | 0 | 1 | 0 | 103 | 105 | |
| 11:45 AS 12:00 | 105 | 0 | 2 | 0 | 107 | 110 | 417 |
| 12:00 AS 12:15 | 102 | 0 | 1 | 0 | 103 | 105 | 418 |
| 12:15 AS 12:30 | 99 | 0 | 0 | 0 | 99 | 99 | 418 |
| 12:30 AS 12:45 | 100 | 0 | 1 | 0 | 101 | 103 | 416 |
| 12:45 AS 13:00 | 102 | 0 | 1 | 0 | 103 | 105 | 411 |
| 13:00 AS 13:15 | 99 | 0 | 1 | 0 | 100 | 102 | 408 |
| 13:15 AS 13:30 | 91 | 0 | 0 | 0 | 91 | 91 | 400 |
| 13:30 AS 13:45 | 87 | 0 | 2 | 0 | 89 | 92 | 389 |
| 13:45 AS 14:00 | 95 | 0 | 1 | 0 | 96 | 98 | 382 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 49 | 0 | 1 | 0 | 50 | 52 | |
| 11:15 AS 11:30 | 67 | 0 | 0 | 0 | 67 | 67 | |
| 11:30 AS 11:45 | 40 | 0 | 0 | 0 | 40 | 40 | |
| 11:45 AS 12:00 | 48 | 0 | 1 | 0 | 49 | 51 | 209 |
| 12:00 AS 12:15 | 50 | 0 | 0 | 0 | 50 | 50 | 208 |
| 12:15 AS 12:30 | 53 | 0 | 0 | 0 | 53 | 53 | 194 |
| 12:30 AS 12:45 | 36 | 0 | 0 | 0 | 36 | 36 | 190 |
| 12:45 AS 13:00 | 65 | 0 | 1 | 0 | 66 | 68 | 207 |
| 13:00 AS 13:15 | 53 | 0 | 1 | 0 | 54 | 56 | 212 |
| 13:15 AS 13:30 | 63 | 0 | 0 | 0 | 63 | 63 | 222 |
| 13:30 AS 13:45 | 57 | 0 | 0 | 0 | 57 | 57 | 243 |
| 13:45 AS 14:00 | 61 | 0 | 2 | 0 | 63 | 66 | 242 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 269 | 0 | 5 | 5 | 279 | 292 | |
| 11:15 AS 11:30 | 229 | 0 | 10 | 4 | 243 | 262 | |
| 11:30 AS 11:45 | 245 | 0 | 10 | 7 | 262 | 284 | |
| 11:45 AS 12:00 | 254 | 0 | 9 | 4 | 267 | 285 | 1.122 |
| 12:00 AS 12:15 | 264 | 0 | 7 | 6 | 277 | 294 | 1.124 |
| 12:15 AS 12:30 | 257 | 0 | 6 | 5 | 268 | 282 | 1.144 |
| 12:30 AS 12:45 | 285 | 0 | 8 | 7 | 300 | 319 | 1.179 |
| 12:45 AS 13:00 | 258 | 0 | 5 | 5 | 268 | 281 | 1.175 |
| 13:00 AS 13:15 | 277 | 0 | 5 | 2 | 284 | 294 | 1.175 |
| 13:15 AS 13:30 | 318 | 0 | 13 | 7 | 338 | 365 | 1.258 |
| 13:30 AS 13:45 | 290 | 0 | 6 | 8 | 304 | 321 | 1.260 |
| 13:45 AS 14:00 | 293 | 0 | 4 | 5 | 302 | 313 | 1.292 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 73 | 0 | 4 | 0 | 77 | 83 | |
| 11:15 AS 11:30 | 72 | 0 | 3 | 0 | 75 | 80 | |
| 11:30 AS 11:45 | 85 | 0 | 2 | 0 | 87 | 90 | |
| 11:45 AS 12:00 | 104 | 0 | 1 | 2 | 107 | 111 | 363 |
| 12:00 AS 12:15 | 95 | 0 | 0 | 0 | 95 | 95 | 375 |
| 12:15 AS 12:30 | 98 | 0 | 0 | 0 | 98 | 98 | 394 |
| 12:30 AS 12:45 | 102 | 0 | 2 | 0 | 104 | 107 | 411 |
| 12:45 AS 13:00 | 112 | 0 | 2 | 0 | 114 | 117 | 417 |
| 13:00 AS 13:15 | 109 | 0 | 3 | 0 | 112 | 117 | 439 |
| 13:15 AS 13:30 | 91 | 0 | 0 | 0 | 91 | 91 | 432 |
| 13:30 AS 13:45 | 107 | 0 | 1 | 1 | 109 | 112 | 436 |
| 13:45 AS 14:00 | 104 | 0 | 0 | 1 | 105 | 106 | 425 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 12 | 0 | 1 | 0 | 13 | 15 | |
| 11:15 AS 11:30 | 20 | 0 | 1 | 1 | 22 | 25 | |
| 11:30 AS 11:45 | 19 | 0 | 1 | 0 | 20 | 22 | |
| 11:45 AS 12:00 | 24 | 0 | 1 | 0 | 25 | 27 | 87 |
| 12:00 AS 12:15 | 15 | 0 | 0 | 0 | 15 | 15 | 88 |
| 12:15 AS 12:30 | 26 | 0 | 0 | 0 | 26 | 26 | 89 |
| 12:30 AS 12:45 | 23 | 0 | 3 | 0 | 26 | 31 | 98 |
| 12:45 AS 13:00 | 23 | 0 | 0 | 0 | 23 | 23 | 95 |
| 13:00 AS 13:15 | 21 | 0 | 2 | 0 | 23 | 26 | 106 |
| 13:15 AS 13:30 | 20 | 0 | 0 | 1 | 21 | 22 | 102 |
| 13:30 AS 13:45 | 19 | 0 | 0 | 1 | 20 | 21 | 92 |
| 13:45 AS 14:00 | 14 | 0 | 1 | 0 | 15 | 17 | 86 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 41 | 0 | 2 | 0 | 43 | 46 | |
| 11:15 AS 11:30 | 29 | 0 | 3 | 0 | 32 | 37 | |
| 11:30 AS 11:45 | 44 | 0 | 0 | 0 | 44 | 44 | |
| 11:45 AS 12:00 | 56 | 0 | 3 | 1 | 60 | 66 | 192 |
| 12:00 AS 12:15 | 58 | 0 | 1 | 0 | 59 | 61 | 207 |
| 12:15 AS 12:30 | 48 | 0 | 1 | 0 | 49 | 51 | 221 |
| 12:30 AS 12:45 | 63 | 0 | 0 | 0 | 63 | 63 | 240 |
| 12:45 AS 13:00 | 53 | 0 | 1 | 2 | 56 | 60 | 234 |
| 13:00 AS 13:15 | 68 | 0 | 2 | 0 | 70 | 73 | 246 |
| 13:15 AS 13:30 | 40 | 0 | 1 | 0 | 41 | 43 | 238 |
| 13:30 AS 13:45 | 43 | 0 | 1 | 1 | 45 | 48 | 223 |
| 13:45 AS 14:00 | 49 | 0 | 5 | 0 | 54 | 62 | 225 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 327 | 0 | 15 | 6 | 348 | 377 | |
| 11:15 AS 11:30 | 289 | 0 | 12 | 7 | 308 | 333 | |
| 11:30 AS 11:45 | 287 | 0 | 4 | 5 | 296 | 307 | |
| 11:45 AS 12:00 | 317 | 0 | 7 | 6 | 330 | 347 | 1.363 |
| 12:00 AS 12:15 | 397 | 0 | 5 | 3 | 405 | 416 | 1.402 |
| 12:15 AS 12:30 | 408 | 0 | 9 | 10 | 427 | 451 | 1.520 |
| 12:30 AS 12:45 | 377 | 0 | 6 | 8 | 391 | 408 | 1.621 |
| 12:45 AS 13:00 | 468 | 0 | 7 | 7 | 482 | 500 | 1.774 |
| 13:00 AS 13:15 | 347 | 0 | 7 | 5 | 359 | 375 | 1.733 |
| 13:15 AS 13:30 | 370 | 0 | 5 | 5 | 380 | 393 | 1.675 |
| 13:30 AS 13:45 | 298 | 0 | 8 | 5 | 311 | 328 | 1.595 |
| 13:45 AS 14:00 | 337 | 0 | 6 | 8 | 351 | 368 | 1.463 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 64 | 0 | 5 | 0 | 69 | 77 | |
| 11:15 AS 11:30 | 51 | 0 | 5 | 0 | 56 | 64 | |
| 11:30 AS 11:45 | 75 | 0 | 2 | 0 | 77 | 80 | |
| 11:45 AS 12:00 | 104 | 0 | 4 | 3 | 111 | 120 | 340 |
| 12:00 AS 12:15 | 84 | 0 | 1 | 0 | 85 | 87 | 350 |
| 12:15 AS 12:30 | 90 | 0 | 1 | 0 | 91 | 93 | 379 |
| 12:30 AS 12:45 | 105 | 0 | 0 | 0 | 105 | 105 | 404 |
| 12:45 AS 13:00 | 98 | 0 | 1 | 0 | 99 | 101 | 385 |
| 13:00 AS 13:15 | 101 | 0 | 5 | 0 | 106 | 114 | 412 |
| 13:15 AS 13:30 | 60 | 0 | 2 | 1 | 63 | 67 | 386 |
| 13:30 AS 13:45 | 79 | 0 | 0 | 3 | 82 | 85 | 366 |
| 13:45 AS 14:00 | 80 | 0 | 5 | 0 | 85 | 93 | 358 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 10 | 0 | 0 | 0 | 10 | 10 | |
| 11:15 AS 11:30 | 12 | 0 | 0 | 0 | 12 | 12 | |
| 11:30 AS 11:45 | 13 | 0 | 0 | 0 | 13 | 13 | |
| 11:45 AS 12:00 | 14 | 0 | 0 | 0 | 14 | 14 | 49 |
| 12:00 AS 12:15 | 10 | 0 | 0 | 0 | 10 | 10 | 49 |
| 12:15 AS 12:30 | 17 | 0 | 0 | 0 | 17 | 17 | 54 |
| 12:30 AS 12:45 | 8 | 0 | 0 | 0 | 8 | 8 | 49 |
| 12:45 AS 13:00 | 12 | 0 | 1 | 0 | 13 | 15 | 50 |
| 13:00 AS 13:15 | 12 | 0 | 1 | 0 | 13 | 15 | 54 |
| 13:15 AS 13:30 | 14 | 0 | 0 | 0 | 14 | 14 | 51 |
| 13:30 AS 13:45 | 6 | 0 | 0 | 0 | 6 | 6 | 49 |
| 13:45 AS 14:00 | 12 | 0 | 1 | 0 | 13 | 15 | 49 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 62 | 0 | 0 | 0 | 62 | 62 | |
| 11:15 AS 11:30 | 70 | 0 | 1 | 1 | 72 | 75 | |
| 11:30 AS 11:45 | 73 | 0 | 1 | 0 | 74 | 76 | |
| 11:45 AS 12:00 | 80 | 0 | 1 | 0 | 81 | 83 | 295 |
| 12:00 AS 12:15 | 84 | 0 | 0 | 1 | 85 | 86 | 319 |
| 12:15 AS 12:30 | 82 | 0 | 0 | 0 | 82 | 82 | 326 |
| 12:30 AS 12:45 | 83 | 0 | 2 | 0 | 85 | 88 | 339 |
| 12:45 AS 13:00 | 90 | 0 | 2 | 0 | 92 | 95 | 351 |
| 13:00 AS 13:15 | 97 | 0 | 1 | 0 | 98 | 100 | 365 |
| 13:15 AS 13:30 | 91 | 0 | 0 | 0 | 91 | 91 | 374 |
| 13:30 AS 13:45 | 90 | 0 | 2 | 0 | 92 | 95 | 381 |
| 13:45 AS 14:00 | 87 | 0 | 1 | 0 | 88 | 90 | 375 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 33 | 0 | 0 | 0 | 33 | 33 | |
| 11:15 AS 11:30 | 36 | 0 | 0 | 0 | 36 | 36 | |
| 11:30 AS 11:45 | 46 | 0 | 0 | 0 | 46 | 46 | |
| 11:45 AS 12:00 | 55 | 0 | 2 | 0 | 57 | 60 | 175 |
| 12:00 AS 12:15 | 60 | 0 | 1 | 0 | 61 | 63 | 205 |
| 12:15 AS 12:30 | 59 | 0 | 0 | 0 | 59 | 59 | 228 |
| 12:30 AS 12:45 | 57 | 0 | 3 | 0 | 60 | 65 | 246 |
| 12:45 AS 13:00 | 61 | 0 | 1 | 0 | 62 | 64 | 250 |
| 13:00 AS 13:15 | 58 | 0 | 1 | 1 | 60 | 63 | 250 |
| 13:15 AS 13:30 | 41 | 0 | 0 | 0 | 41 | 41 | 232 |
| 13:30 AS 13:45 | 42 | 0 | 0 | 0 | 42 | 42 | 209 |
| 13:45 AS 14:00 | 52 | 0 | 0 | 0 | 52 | 52 | 198 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 11:00 AS 11:15 | 64 | 0 | 8 | 0 | 72 | 84 | |
| 11:15 AS 11:30 | 58 | 0 | 5 | 1 | 64 | 73 | |
| 11:30 AS 11:45 | 54 | 0 | 3 | 0 | 57 | 62 | |
| 11:45 AS 12:00 | 63 | 0 | 4 | 1 | 68 | 75 | 293 |
| 12:00 AS 12:15 | 60 | 0 | 3 | 0 | 63 | 68 | 277 |
| 12:15 AS 12:30 | 64 | 0 | 3 | 0 | 67 | 72 | 276 |
| 12:30 AS 12:45 | 51 | 0 | 5 | 1 | 57 | 66 | 280 |
| 12:45 AS 13:00 | 42 | 0 | 1 | 0 | 43 | 45 | 249 |
| 13:00 AS 13:15 | 56 | 0 | 2 | 0 | 58 | 61 | 243 |
| 13:15 AS 13:30 | 46 | 0 | 0 | 0 | 46 | 46 | 217 |
| 13:30 AS 13:45 | 42 | 0 | 1 | 0 | 43 | 45 | 196 |
| 13:45 AS 14:00 | 60 | 0 | 4 | 1 | 65 | 72 | 224 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 11:00 AS 11:15 | 110 | 0 | 5 | 0 | 115 | 123 | |
| 11:15 AS 11:30 | 112 | 0 | 3 | 1 | 116 | 122 | |
| 11:30 AS 11:45 | 117 | 0 | 3 | 0 | 120 | 125 | |
| 11:45 AS 12:00 | 122 | 0 | 5 | 0 | 127 | 135 | 503 |
| 12:00 AS 12:15 | 131 | 0 | 2 | 0 | 133 | 136 | 517 |
| 12:15 AS 12:30 | 132 | 0 | 2 | 0 | 134 | 137 | 532 |
| 12:30 AS 12:45 | 122 | 0 | 5 | 0 | 127 | 135 | 542 |
| 12:45 AS 13:00 | 118 | 0 | 3 | 0 | 121 | 126 | 533 |
| 13:00 AS 13:15 | 125 | 0 | 2 | 0 | 127 | 130 | 527 |
| 13:15 AS 13:30 | 123 | 0 | 0 | 0 | 123 | 123 | 513 |
| 13:30 AS 13:45 | 122 | 0 | 1 | 0 | 123 | 125 | 503 |
| 13:45 AS 14:00 | 121 | 0 | 3 | 1 | 125 | 131 | 508 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 11:00 AS 11:15 | 49 | 0 | 3 | 0 | 52 | 57 | |
| 11:15 AS 11:30 | 52 | 0 | 3 | 1 | 56 | 62 | |
| 11:30 AS 11:45 | 56 | 0 | 1 | 0 | 57 | 59 | |
| 11:45 AS 12:00 | 76 | 0 | 2 | 1 | 79 | 83 | 260 |
| 12:00 AS 12:15 | 73 | 0 | 2 | 0 | 75 | 78 | 281 |
| 12:15 AS 12:30 | 73 | 0 | 1 | 0 | 74 | 76 | 295 |
| 12:30 AS 12:45 | 69 | 0 | 5 | 1 | 75 | 84 | 320 |
| 12:45 AS 13:00 | 75 | 0 | 1 | 0 | 76 | 78 | 315 |
| 13:00 AS 13:15 | 86 | 0 | 2 | 0 | 88 | 91 | 328 |
| 13:15 AS 13:30 | 55 | 0 | 0 | 0 | 55 | 55 | 307 |
| 13:30 AS 13:45 | 52 | 0 | 2 | 0 | 54 | 57 | 281 |
| 13:45 AS 14:00 | 78 | 0 | 2 | 0 | 80 | 83 | 286 |

TARDE

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 41 | 0 | 0 | 0 | 41 | 41 | |
| 17:15 AS 17:30 | 53 | 0 | 0 | 0 | 53 | 53 | |
| 17:30 AS 17:45 | 44 | 0 | 0 | 0 | 44 | 44 | |
| 17:45 AS 18:00 | 46 | 0 | 0 | 0 | 46 | 46 | 184 |
| 18:00 AS 18:15 | 53 | 0 | 0 | 0 | 53 | 53 | 196 |
| 18:15 AS 18:30 | 49 | 0 | 0 | 0 | 49 | 49 | 192 |
| 18:30 AS 18:45 | 41 | 0 | 1 | 0 | 42 | 44 | 192 |
| 18:45 AS 19:00 | 27 | 0 | 0 | 0 | 27 | 27 | 173 |
| 19:00 AS 19:15 | 39 | 0 | 0 | 0 | 39 | 39 | 159 |
| 19:15 AS 19:30 | 32 | 0 | 0 | 0 | 32 | 32 | 142 |
| 19:30 AS 19:45 | 30 | 0 | 0 | 0 | 30 | 30 | 128 |
| 19:45 AS 20:00 | 31 | 0 | 0 | 0 | 31 | 31 | 132 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 186 | 0 | 0 | 0 | 186 | 186 | |
| 17:15 AS 17:30 | 171 | 0 | 1 | 0 | 172 | 174 | |
| 17:30 AS 17:45 | 201 | 0 | 1 | 1 | 203 | 206 | |
| 17:45 AS 18:00 | 203 | 0 | 2 | 1 | 206 | 210 | 775 |
| 18:00 AS 18:15 | 190 | 0 | 1 | 0 | 191 | 193 | 782 |
| 18:15 AS 18:30 | 182 | 0 | 2 | 3 | 187 | 193 | 801 |
| 18:30 AS 18:45 | 183 | 0 | 0 | 0 | 183 | 183 | 779 |
| 18:45 AS 19:00 | 187 | 0 | 1 | 1 | 189 | 192 | 760 |
| 19:00 AS 19:15 | 158 | 0 | 1 | 1 | 160 | 163 | 730 |
| 19:15 AS 19:30 | 131 | 0 | 1 | 0 | 132 | 134 | 671 |
| 19:30 AS 19:45 | 106 | 0 | 1 | 1 | 108 | 111 | 598 |
| 19:45 AS 20:00 | 81 | 0 | 0 | 0 | 81 | 81 | 488 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 22 | 0 | 0 | 0 | 22 | 22 | |
| 17:15 AS 17:30 | 20 | 0 | 0 | 0 | 20 | 20 | |
| 17:30 AS 17:45 | 18 | 0 | 0 | 0 | 18 | 18 | |
| 17:45 AS 18:00 | 17 | 0 | 0 | 0 | 17 | 17 | 77 |
| 18:00 AS 18:15 | 16 | 0 | 0 | 0 | 16 | 16 | 71 |
| 18:15 AS 18:30 | 13 | 0 | 0 | 0 | 13 | 13 | 64 |
| 18:30 AS 18:45 | 12 | 0 | 1 | 0 | 13 | 15 | 61 |
| 18:45 AS 19:00 | 44 | 0 | 0 | 0 | 44 | 44 | 88 |
| 19:00 AS 19:15 | 22 | 0 | 0 | 0 | 22 | 22 | 94 |
| 19:15 AS 19:30 | 11 | 0 | 0 | 0 | 11 | 11 | 92 |
| 19:30 AS 19:45 | 14 | 0 | 0 | 0 | 14 | 14 | 91 |
| 19:45 AS 20:00 | 17 | 0 | 2 | 0 | 19 | 22 | 69 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 304 | 0 | 7 | 7 | 318 | 336 | |
| 17:15 AS 17:30 | 366 | 0 | 3 | 13 | 382 | 400 | |
| 17:30 AS 17:45 | 328 | 0 | 2 | 12 | 342 | 357 | |
| 17:45 AS 18:00 | 321 | 0 | 1 | 13 | 335 | 350 | 1.442 |
| 18:00 AS 18:15 | 351 | 0 | 4 | 10 | 365 | 381 | 1.487 |
| 18:15 AS 18:30 | 346 | 0 | 2 | 7 | 355 | 365 | 1.453 |
| 18:30 AS 18:45 | 303 | 0 | 1 | 12 | 316 | 330 | 1.425 |
| 18:45 AS 19:00 | 696 | 0 | 2 | 22 | 720 | 745 | 1.821 |
| 19:00 AS 19:15 | 290 | 0 | 0 | 7 | 297 | 304 | 1.744 |
| 19:15 AS 19:30 | 289 | 0 | 2 | 7 | 298 | 308 | 1.687 |
| 19:30 AS 19:45 | 237 | 0 | 4 | 3 | 244 | 253 | 1.610 |
| 19:45 AS 20:00 | 241 | 0 | 3 | 4 | 248 | 257 | 1.122 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 365 | 0 | 5 | 6 | 376 | 390 | |
| 17:15 AS 17:30 | 432 | 0 | 3 | 9 | 444 | 458 | |
| 17:30 AS 17:45 | 355 | 0 | 3 | 9 | 367 | 381 | |
| 17:45 AS 18:00 | 376 | 0 | 3 | 12 | 391 | 408 | 1.635 |
| 18:00 AS 18:15 | 406 | 0 | 5 | 11 | 422 | 441 | 1.686 |
| 18:15 AS 18:30 | 398 | 0 | 3 | 11 | 412 | 428 | 1.656 |
| 18:30 AS 18:45 | 388 | 0 | 1 | 12 | 401 | 415 | 1.690 |
| 18:45 AS 19:00 | 358 | 0 | 1 | 12 | 371 | 385 | 1.667 |
| 19:00 AS 19:15 | 332 | 0 | 4 | 9 | 345 | 360 | 1.587 |
| 19:15 AS 19:30 | 344 | 0 | 1 | 8 | 353 | 363 | 1.522 |
| 19:30 AS 19:45 | 263 | 0 | 5 | 7 | 275 | 290 | 1.397 |
| 19:45 AS 20:00 | 264 | 0 | 3 | 7 | 274 | 286 | 1.298 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 130 | 0 | 1 | 1 | 132 | 135 | |
| 17:15 AS 17:30 | 124 | 0 | 0 | 1 | 125 | 126 | |
| 17:30 AS 17:45 | 122 | 0 | 1 | 0 | 123 | 125 | |
| 17:45 AS 18:00 | 125 | 0 | 0 | 1 | 126 | 127 | 512 |
| 18:00 AS 18:15 | 114 | 0 | 0 | 1 | 115 | 116 | 494 |
| 18:15 AS 18:30 | 105 | 0 | 0 | 0 | 105 | 105 | 473 |
| 18:30 AS 18:45 | 121 | 0 | 1 | 1 | 123 | 126 | 474 |
| 18:45 AS 19:00 | 124 | 0 | 2 | 2 | 128 | 133 | 480 |
| 19:00 AS 19:15 | 122 | 0 | 1 | 3 | 126 | 131 | 494 |
| 19:15 AS 19:30 | 113 | 0 | 0 | 1 | 114 | 115 | 504 |
| 19:30 AS 19:45 | 103 | 0 | 1 | 0 | 104 | 106 | 484 |
| 19:45 AS 20:00 | 93 | 0 | 2 | 1 | 96 | 100 | 451 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 56 | 0 | 0 | 0 | 56 | 56 | |
| 17:15 AS 17:30 | 54 | 0 | 0 | 0 | 54 | 54 | |
| 17:30 AS 17:45 | 70 | 0 | 0 | 0 | 70 | 70 | |
| 17:45 AS 18:00 | 61 | 0 | 0 | 0 | 61 | 61 | 241 |
| 18:00 AS 18:15 | 55 | 0 | 0 | 0 | 55 | 55 | 240 |
| 18:15 AS 18:30 | 50 | 0 | 0 | 0 | 50 | 50 | 236 |
| 18:30 AS 18:45 | 55 | 0 | 0 | 0 | 55 | 55 | 221 |
| 18:45 AS 19:00 | 53 | 0 | 1 | 0 | 54 | 56 | 216 |
| 19:00 AS 19:15 | 44 | 0 | 1 | 0 | 45 | 47 | 207 |
| 19:15 AS 19:30 | 42 | 0 | 0 | 0 | 42 | 42 | 199 |
| 19:30 AS 19:45 | 37 | 0 | 0 | 0 | 37 | 37 | 181 |
| 19:45 AS 20:00 | 33 | 0 | 1 | 0 | 34 | 36 | 161 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 262 | 0 | 6 | 7 | 275 | 291 | |
| 17:15 AS 17:30 | 332 | 0 | 3 | 13 | 348 | 366 | |
| 17:30 AS 17:45 | 283 | 0 | 2 | 12 | 297 | 312 | |
| 17:45 AS 18:00 | 295 | 0 | 1 | 13 | 309 | 324 | 1.292 |
| 18:00 AS 18:15 | 316 | 0 | 4 | 10 | 330 | 346 | 1.347 |
| 18:15 AS 18:30 | 319 | 0 | 2 | 7 | 328 | 338 | 1.320 |
| 18:30 AS 18:45 | 264 | 0 | 1 | 12 | 277 | 291 | 1.298 |
| 18:45 AS 19:00 | 653 | 0 | 2 | 22 | 677 | 702 | 1.677 |
| 19:00 AS 19:15 | 228 | 0 | 0 | 5 | 233 | 238 | 1.569 |
| 19:15 AS 19:30 | 253 | 0 | 2 | 6 | 261 | 270 | 1.501 |
| 19:30 AS 19:45 | 183 | 0 | 4 | 3 | 190 | 199 | 1.409 |
| 19:45 AS 20:00 | 197 | 0 | 3 | 4 | 204 | 213 | 920 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 121 | 0 | 1 | 0 | 122 | 124 | |
| 17:15 AS 17:30 | 84 | 0 | 1 | 0 | 85 | 87 | |
| 17:30 AS 17:45 | 116 | 0 | 1 | 0 | 117 | 119 | |
| 17:45 AS 18:00 | 107 | 0 | 1 | 0 | 108 | 110 | 438 |
| 18:00 AS 18:15 | 123 | 0 | 0 | 0 | 123 | 123 | 438 |
| 18:15 AS 18:30 | 95 | 0 | 0 | 2 | 97 | 99 | 450 |
| 18:30 AS 18:45 | 106 | 0 | 1 | 1 | 108 | 111 | 442 |
| 18:45 AS 19:00 | 90 | 0 | 0 | 0 | 90 | 90 | 423 |
| 19:00 AS 19:15 | 70 | 0 | 0 | 2 | 72 | 74 | 374 |
| 19:15 AS 19:30 | 74 | 0 | 0 | 1 | 75 | 76 | 351 |
| 19:30 AS 19:45 | 60 | 0 | 0 | 0 | 60 | 60 | 300 |
| 19:45 AS 20:00 | 48 | 0 | 0 | 2 | 50 | 52 | 262 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 20 | 0 | 0 | 0 | 20 | 20 | |
| 17:15 AS 17:30 | 18 | 0 | 0 | 0 | 18 | 18 | |
| 17:30 AS 17:45 | 24 | 0 | 0 | 0 | 24 | 24 | |
| 17:45 AS 18:00 | 18 | 0 | 0 | 0 | 18 | 18 | 80 |
| 18:00 AS 18:15 | 27 | 0 | 0 | 0 | 27 | 27 | 87 |
| 18:15 AS 18:30 | 36 | 0 | 0 | 0 | 36 | 36 | 105 |
| 18:30 AS 18:45 | 17 | 0 | 0 | 0 | 17 | 17 | 98 |
| 18:45 AS 19:00 | 22 | 0 | 0 | 0 | 22 | 22 | 102 |
| 19:00 AS 19:15 | 33 | 0 | 0 | 0 | 33 | 33 | 108 |
| 19:15 AS 19:30 | 20 | 0 | 0 | 1 | 21 | 22 | 94 |
| 19:30 AS 19:45 | 24 | 0 | 1 | 0 | 25 | 27 | 104 |
| 19:45 AS 20:00 | 14 | 0 | 0 | 0 | 14 | 14 | 96 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 42 | 0 | 1 | 0 | 43 | 45 | |
| 17:15 AS 17:30 | 34 | 0 | 0 | 0 | 34 | 34 | |
| 17:30 AS 17:45 | 45 | 0 | 0 | 0 | 45 | 45 | |
| 17:45 AS 18:00 | 26 | 0 | 0 | 0 | 26 | 26 | 150 |
| 18:00 AS 18:15 | 35 | 0 | 0 | 0 | 35 | 35 | 140 |
| 18:15 AS 18:30 | 27 | 0 | 0 | 0 | 27 | 27 | 133 |
| 18:30 AS 18:45 | 39 | 0 | 0 | 0 | 39 | 39 | 127 |
| 18:45 AS 19:00 | 43 | 0 | 0 | 0 | 43 | 43 | 144 |
| 19:00 AS 19:15 | 62 | 0 | 0 | 2 | 64 | 66 | 175 |
| 19:15 AS 19:30 | 36 | 0 | 0 | 1 | 37 | 38 | 186 |
| 19:30 AS 19:45 | 54 | 0 | 0 | 0 | 54 | 54 | 201 |
| 19:45 AS 20:00 | 44 | 0 | 0 | 0 | 44 | 44 | 202 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 406 | 0 | 5 | 6 | 417 | 431 | |
| 17:15 AS 17:30 | 485 | 0 | 3 | 9 | 497 | 511 | |
| 17:30 AS 17:45 | 399 | 0 | 3 | 9 | 411 | 425 | |
| 17:45 AS 18:00 | 422 | 0 | 3 | 12 | 437 | 454 | 1.819 |
| 18:00 AS 18:15 | 459 | 0 | 5 | 11 | 475 | 494 | 1.882 |
| 18:15 AS 18:30 | 447 | 0 | 3 | 11 | 461 | 477 | 1.848 |
| 18:30 AS 18:45 | 429 | 0 | 2 | 12 | 443 | 458 | 1.882 |
| 18:45 AS 19:00 | 385 | 0 | 1 | 12 | 398 | 412 | 1.840 |
| 19:00 AS 19:15 | 371 | 0 | 4 | 9 | 384 | 399 | 1.745 |
| 19:15 AS 19:30 | 376 | 0 | 1 | 8 | 385 | 395 | 1.663 |
| 19:30 AS 19:45 | 293 | 0 | 5 | 7 | 305 | 320 | 1.525 |
| 19:45 AS 20:00 | 295 | 0 | 3 | 7 | 305 | 317 | 1.430 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 99 | 0 | 0 | 0 | 99 | 99 | |
| 17:15 AS 17:30 | 97 | 0 | 0 | 0 | 97 | 97 | |
| 17:30 AS 17:45 | 94 | 0 | 1 | 0 | 95 | 97 | |
| 17:45 AS 18:00 | 59 | 0 | 0 | 0 | 59 | 59 | 352 |
| 18:00 AS 18:15 | 92 | 0 | 1 | 0 | 93 | 95 | 347 |
| 18:15 AS 18:30 | 70 | 0 | 0 | 2 | 72 | 74 | 324 |
| 18:30 AS 18:45 | 77 | 0 | 0 | 0 | 77 | 77 | 305 |
| 18:45 AS 19:00 | 75 | 0 | 0 | 0 | 75 | 75 | 321 |
| 19:00 AS 19:15 | 96 | 0 | 0 | 2 | 98 | 100 | 326 |
| 19:15 AS 19:30 | 59 | 0 | 0 | 1 | 60 | 61 | 313 |
| 19:30 AS 19:45 | 63 | 0 | 1 | 0 | 64 | 66 | 302 |
| 19:45 AS 20:00 | 35 | 0 | 1 | 2 | 38 | 42 | 268 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 16 | 0 | 0 | 0 | 16 | 16 | |
| 17:15 AS 17:30 | 15 | 0 | 0 | 0 | 15 | 15 | |
| 17:30 AS 17:45 | 18 | 0 | 0 | 0 | 18 | 18 | |
| 17:45 AS 18:00 | 16 | 0 | 0 | 0 | 16 | 16 | 65 |
| 18:00 AS 18:15 | 13 | 0 | 0 | 0 | 13 | 13 | 62 |
| 18:15 AS 18:30 | 13 | 0 | 0 | 0 | 13 | 13 | 60 |
| 18:30 AS 18:45 | 7 | 0 | 0 | 0 | 7 | 7 | 49 |
| 18:45 AS 19:00 | 20 | 0 | 0 | 0 | 20 | 20 | 53 |
| 19:00 AS 19:15 | 15 | 0 | 0 | 1 | 16 | 17 | 57 |
| 19:15 AS 19:30 | 21 | 0 | 1 | 1 | 23 | 26 | 70 |
| 19:30 AS 19:45 | 18 | 0 | 0 | 0 | 18 | 18 | 81 |
| 19:45 AS 20:00 | 6 | 0 | 0 | 0 | 6 | 6 | 67 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 84 | 0 | 1 | 0 | 85 | 87 | |
| 17:15 AS 17:30 | 88 | 0 | 1 | 0 | 89 | 91 | |
| 17:30 AS 17:45 | 91 | 0 | 0 | 0 | 91 | 91 | |
| 17:45 AS 18:00 | 92 | 0 | 2 | 0 | 94 | 97 | 365 |
| 18:00 AS 18:15 | 93 | 0 | 0 | 1 | 94 | 95 | 374 |
| 18:15 AS 18:30 | 88 | 0 | 1 | 0 | 89 | 91 | 374 |
| 18:30 AS 18:45 | 85 | 0 | 2 | 1 | 88 | 92 | 375 |
| 18:45 AS 19:00 | 80 | 0 | 0 | 0 | 80 | 80 | 358 |
| 19:00 AS 19:15 | 69 | 0 | 1 | 0 | 70 | 72 | 334 |
| 19:15 AS 19:30 | 71 | 0 | 2 | 0 | 73 | 76 | 320 |
| 19:30 AS 19:45 | 75 | 0 | 1 | 1 | 77 | 80 | 307 |
| 19:45 AS 20:00 | 71 | 0 | 2 | 0 | 73 | 76 | 303 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 54 | 0 | 1 | 0 | 55 | 57 | |
| 17:15 AS 17:30 | 48 | 0 | 0 | 0 | 48 | 48 | |
| 17:30 AS 17:45 | 57 | 0 | 0 | 1 | 58 | 59 | |
| 17:45 AS 18:00 | 55 | 0 | 0 | 0 | 55 | 55 | 219 |
| 18:00 AS 18:15 | 44 | 0 | 0 | 0 | 44 | 44 | 206 |
| 18:15 AS 18:30 | 50 | 0 | 0 | 0 | 50 | 50 | 208 |
| 18:30 AS 18:45 | 38 | 0 | 0 | 0 | 38 | 38 | 187 |
| 18:45 AS 19:00 | 40 | 0 | 1 | 0 | 41 | 43 | 175 |
| 19:00 AS 19:15 | 35 | 0 | 0 | 0 | 35 | 35 | 166 |
| 19:15 AS 19:30 | 34 | 0 | 0 | 0 | 34 | 34 | 150 |
| 19:30 AS 19:45 | 40 | 0 | 0 | 0 | 40 | 40 | 152 |
| 19:45 AS 20:00 | 24 | 0 | 0 | 0 | 24 | 24 | 133 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 98 | 0 | 0 | 1 | 99 | 100 | |
| 17:15 AS 17:30 | 73 | 0 | 0 | 2 | 75 | 77 | |
| 17:30 AS 17:45 | 100 | 0 | 1 | 0 | 101 | 103 | |
| 17:45 AS 18:00 | 80 | 0 | 0 | 1 | 81 | 82 | 362 |
| 18:00 AS 18:15 | 119 | 0 | 1 | 2 | 122 | 126 | 387 |
| 18:15 AS 18:30 | 118 | 0 | 0 | 0 | 118 | 118 | 428 |
| 18:30 AS 18:45 | 111 | 0 | 0 | 1 | 112 | 113 | 439 |
| 18:45 AS 19:00 | 85 | 0 | 0 | 5 | 90 | 95 | 452 |
| 19:00 AS 19:15 | 93 | 0 | 1 | 9 | 103 | 114 | 440 |
| 19:15 AS 19:30 | 68 | 0 | 2 | 6 | 76 | 85 | 407 |
| 19:30 AS 19:45 | 68 | 0 | 0 | 0 | 68 | 68 | 362 |
| 19:45 AS 20:00 | 71 | 0 | 1 | 2 | 74 | 78 | 344 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 144 | 0 | 1 | 1 | 146 | 149 | |
| 17:15 AS 17:30 | 138 | 0 | 0 | 2 | 140 | 142 | |
| 17:30 AS 17:45 | 156 | 0 | 1 | 0 | 157 | 159 | |
| 17:45 AS 18:00 | 153 | 0 | 2 | 1 | 156 | 160 | 609 |
| 18:00 AS 18:15 | 155 | 0 | 1 | 3 | 159 | 164 | 624 |
| 18:15 AS 18:30 | 158 | 0 | 0 | 0 | 158 | 158 | 640 |
| 18:30 AS 18:45 | 169 | 0 | 2 | 2 | 173 | 178 | 660 |
| 18:45 AS 19:00 | 150 | 0 | 1 | 5 | 156 | 163 | 662 |
| 19:00 AS 19:15 | 129 | 0 | 2 | 8 | 139 | 150 | 649 |
| 19:15 AS 19:30 | 128 | 0 | 4 | 6 | 138 | 150 | 641 |
| 19:30 AS 19:45 | 131 | 0 | 0 | 1 | 132 | 133 | 596 |
| 19:45 AS 20:00 | 121 | 0 | 0 | 2 | 123 | 125 | 558 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 92 | 0 | 1 | 0 | 93 | 95 | |
| 17:15 AS 17:30 | 71 | 0 | 0 | 0 | 71 | 71 | |
| 17:30 AS 17:45 | 92 | 0 | 0 | 0 | 92 | 92 | |
| 17:45 AS 18:00 | 74 | 0 | 0 | 0 | 74 | 74 | 332 |
| 18:00 AS 18:15 | 101 | 0 | 0 | 0 | 101 | 101 | 338 |
| 18:15 AS 18:30 | 98 | 0 | 0 | 0 | 98 | 98 | 365 |
| 18:30 AS 18:45 | 65 | 0 | 0 | 0 | 65 | 65 | 338 |
| 18:45 AS 19:00 | 55 | 0 | 0 | 0 | 55 | 55 | 319 |
| 19:00 AS 19:15 | 68 | 0 | 0 | 1 | 69 | 70 | 288 |
| 19:15 AS 19:30 | 45 | 0 | 0 | 0 | 45 | 45 | 235 |
| 19:30 AS 19:45 | 52 | 0 | 0 | 0 | 52 | 52 | 222 |
| 19:45 AS 20:00 | 45 | 0 | 0 | 0 | 45 | 45 | 212 |

Nós 70, 32 e 33 - Dia 22/10/2019

MANHÃ

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|-------------|-------------|----------------|----------------|----------------|--|
| 2707 | | 07:00 AS 07:15 | | 07:00 AS 07:15 | |
| 2990 | | 07:15 AS 07:30 | | 07:15 AS 07:30 | |
| 3277 | | 07:30 AS 07:45 | | 07:30 AS 07:45 | |
| 3073 | 12047 | 07:45 AS 08:00 | 07:45 AS 08:00 | 07:00 AS 08:00 | |
| 2972 | 12311 | 08:00 AS 08:15 | 08:00 AS 08:15 | 07:15 AS 08:15 | |
| 2781 | 12102 | 08:15 AS 08:30 | 08:15 AS 08:30 | 07:30 AS 08:30 | |
| 2687 | 11512 | 08:30 AS 08:45 | 08:30 AS 08:45 | 07:45 AS 08:45 | |
| 2946 | 11385 | 08:45 AS 09:00 | 08:45 AS 09:00 | 08:00 AS 09:00 | |
| 2825 | 11239 | 09:00 AS 09:15 | 09:00 AS 09:15 | 08:15 AS 09:15 | |
| 2351 | 10809 | 09:15 AS 09:30 | 09:15 AS 09:30 | 08:30 AS 09:30 | |
| 2483 | 10605 | 09:30 AS 09:45 | 09:30 AS 09:45 | 08:45 AS 09:45 | |
| 2306 | 9965 | 09:45 AS 10:00 | 09:45 AS 10:00 | 09:00 AS 10:00 | |

FHP= 0,94

MÁXIMO 12311 HORA-PICO 08:00 AS 08:15 07:15 AS 08:15

ALMOÇO

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|-------------|-------------|----------------|----------------|----------------|--|
| 2.285 | | 11:00 AS 11:15 | | 11:00 AS 11:15 | |
| 2.114 | | 11:15 AS 11:30 | | 11:15 AS 11:30 | |
| 2.045 | | 11:30 AS 11:45 | | 11:30 AS 11:45 | |
| 2.410 | 8.853 | 11:45 AS 12:00 | 11:45 AS 12:00 | 11:00 AS 12:00 | |
| 2.526 | 9.094 | 12:00 AS 12:15 | 12:00 AS 12:15 | 11:15 AS 12:15 | |
| 2.581 | 9.561 | 12:15 AS 12:30 | 12:15 AS 12:30 | 11:30 AS 12:30 | |
| 2.575 | 10.091 | 12:30 AS 12:45 | 12:30 AS 12:45 | 11:45 AS 12:45 | |
| 2.677 | 10.359 | 12:45 AS 13:00 | 12:45 AS 13:00 | 12:00 AS 13:00 | |
| 2.513 | 10.345 | 13:00 AS 13:15 | 13:00 AS 13:15 | 12:15 AS 13:15 | |
| 2.457 | 10.221 | 13:15 AS 13:30 | 13:15 AS 13:30 | 12:30 AS 13:30 | |
| 2.296 | 9.942 | 13:30 AS 13:45 | 13:30 AS 13:45 | 12:45 AS 13:45 | |
| 2.472 | 9.737 | 13:45 AS 14:00 | 13:45 AS 14:00 | 13:00 AS 14:00 | |

FHP= 0,97

MÁXIMO 10359 HORA-PICO 12:45 AS 13:00 12:00 AS 13:00

TARDE

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|-------------|-------------|----------------|----------------|----------------|--|
| 2.675 | | 17:00 AS 17:15 | | 17:00 AS 17:15 | |
| 2.839 | | 17:15 AS 17:30 | | 17:15 AS 17:30 | |
| 2.741 | | 17:30 AS 17:45 | | 17:30 AS 17:45 | |
| 2.692 | 10.946 | 17:45 AS 18:00 | 17:45 AS 18:00 | 17:00 AS 18:00 | |
| 2.915 | 11.186 | 18:00 AS 18:15 | 18:00 AS 18:15 | 17:15 AS 18:15 | |
| 2.781 | 11.128 | 18:15 AS 18:30 | 18:15 AS 18:30 | 17:30 AS 18:30 | |
| 2.651 | 11.038 | 18:30 AS 18:45 | 18:30 AS 18:45 | 17:45 AS 18:45 | |
| 3.379 | 11.725 | 18:45 AS 19:00 | 18:45 AS 19:00 | 18:00 AS 19:00 | |
| 2.432 | 11.242 | 19:00 AS 19:15 | 19:00 AS 19:15 | 18:15 AS 19:15 | |
| 2.281 | 10.742 | 19:15 AS 19:30 | 19:15 AS 19:30 | 18:30 AS 19:30 | |
| 1.955 | 10.046 | 19:30 AS 19:45 | 19:30 AS 19:45 | 18:45 AS 19:45 | |
| 1.846 | 8.513 | 19:45 AS 20:00 | 19:45 AS 20:00 | 19:00 AS 20:00 | |

FHP= 0,87

MÁXIMO 11725 HORA-PICO 18:45 AS 19:00 18:00 AS 19:00

Nós 70, 32 e 33 - Dia 22/10/2019

MANHÃ

08:00 AS 08:15

| | Volume simples | V.C. | % V.C. | fhp |
|--------------|----------------|------|--------|------|
| MOV. 1 > 2 | 61 | 0 | 0,0% | 0,94 |
| MOV. 1 > 3 | 487 | 9 | 1,8% | |
| MOV. 1 > 4 | 106 | 0 | 0,0% | |
| MOV. 2 > 4 | 1.948 | 76 | 3,9% | |
| MOV. 4 > 2 | 1.617 | 87 | 5,4% | |
| MOV. 4 > 3 | 353 | 5 | 1,4% | |
| MOV. 12 > 11 | 257 | 1 | 0,4% | |
| MOV. 12 > 14 | 1.662 | 74 | 4,5% | |
| MOV. 13 > 11 | 740 | 15 | 2,0% | |
| MOV. 13 > 12 | 56 | 4 | 7,1% | |
| MOV. 13 > 14 | 286 | 2 | 0,7% | |
| MOV. 14 > 12 | 1.678 | 87 | 5,2% | |
| MOV. 23 > 21 | 763 | 20 | 2,6% | |
| MOV. 23 > 22 | 45 | 0 | 0,0% | |
| MOV. 24 > 21 | 319 | 1 | 0,3% | |
| MOV. 24 > 22 | 245 | 7 | 2,9% | |
| MOV. 24 > 23 | 307 | 12 | 3,9% | |
| MOV. 34 > 32 | 493 | 9 | 1,8% | |
| MOV. 35 > 32 | 377 | 10 | 2,7% | |

ALMOÇO

12:45 AS 13:00

| | Volume simples | V.C. | % V.C. | fhp |
|--------------|----------------|------|--------|------|
| MOV. 1 > 2 | 173 | 0 | 0,0% | 0,97 |
| MOV. 1 > 3 | 577 | 5 | 0,9% | |
| MOV. 1 > 4 | 150 | 1 | 0,7% | |
| MOV. 2 > 4 | 1.340 | 54 | 4,0% | |
| MOV. 4 > 2 | 1.532 | 55 | 3,6% | |
| MOV. 4 > 3 | 406 | 3 | 0,7% | |
| MOV. 12 > 11 | 205 | 1 | 0,5% | |
| MOV. 12 > 14 | 1.113 | 49 | 4,4% | |
| MOV. 13 > 11 | 411 | 4 | 1,0% | |
| MOV. 13 > 12 | 90 | 3 | 3,3% | |
| MOV. 13 > 14 | 227 | 5 | 2,2% | |
| MOV. 14 > 12 | 1.705 | 55 | 3,2% | |
| MOV. 23 > 21 | 380 | 3 | 0,8% | |
| MOV. 23 > 22 | 48 | 1 | 2,1% | |
| MOV. 24 > 21 | 344 | 5 | 1,5% | |
| MOV. 24 > 22 | 242 | 5 | 2,1% | |
| MOV. 24 > 23 | 230 | 13 | 5,7% | |
| MOV. 34 > 32 | 515 | 12 | 2,3% | |
| MOV. 35 > 32 | 300 | 10 | 3,3% | |

TARDE

18:45 AS 19:00

| | Volume simples | V.C. | % V.C. | fhp |
|--------------|----------------|------|--------|------|
| MOV. 1 > 2 | 171 | 1 | 0,6% | 0,87 |
| MOV. 1 > 3 | 750 | 8 | 1,1% | |
| MOV. 1 > 4 | 86 | 1 | 1,2% | |
| MOV. 2 > 4 | 1.756 | 60 | 3,4% | |
| MOV. 4 > 2 | 1.606 | 56 | 3,5% | |
| MOV. 4 > 3 | 471 | 7 | 1,5% | |
| MOV. 12 > 11 | 214 | 1 | 0,5% | |
| MOV. 12 > 14 | 1.612 | 60 | 3,7% | |
| MOV. 13 > 11 | 418 | 4 | 1,0% | |
| MOV. 13 > 12 | 102 | 0 | 0,0% | |
| MOV. 13 > 14 | 144 | 0 | 0,0% | |
| MOV. 14 > 12 | 1.777 | 57 | 3,2% | |
| MOV. 23 > 21 | 317 | 3 | 0,9% | |
| MOV. 23 > 22 | 53 | 0 | 0,0% | |
| MOV. 24 > 21 | 351 | 5 | 1,4% | |
| MOV. 24 > 22 | 173 | 1 | 0,6% | |
| MOV. 24 > 23 | 442 | 9 | 2,0% | |
| MOV. 34 > 32 | 646 | 14 | 2,2% | |
| MOV. 35 > 32 | 319 | 0 | 0,0% | |

Nós 70, 32 e 33 - Dia 23/10/2019

MANHÃ

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 9 | 0 | 0 | 0 | 9 | 9 | |
| 07:15 AS 07:30 | 12 | 0 | 0 | 0 | 12 | 12 | |
| 07:30 AS 07:45 | 15 | 0 | 2 | 0 | 17 | 20 | |
| 07:45 AS 08:00 | 18 | 0 | 1 | 0 | 19 | 21 | 62 |
| 08:00 AS 08:15 | 17 | 0 | 0 | 0 | 17 | 17 | 70 |
| 08:15 AS 08:30 | 25 | 0 | 2 | 0 | 27 | 30 | 88 |
| 08:30 AS 08:45 | 29 | 0 | 0 | 0 | 29 | 29 | 97 |
| 08:45 AS 09:00 | 23 | 0 | 1 | 0 | 24 | 26 | 102 |
| 09:00 AS 09:15 | 31 | 0 | 1 | 0 | 32 | 34 | 118 |
| 09:15 AS 09:30 | 22 | 0 | 3 | 0 | 25 | 30 | 118 |
| 09:30 AS 09:45 | 30 | 0 | 2 | 0 | 32 | 35 | 124 |
| 09:45 AS 10:00 | 31 | 0 | 1 | 0 | 32 | 34 | 132 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 90 | 0 | 1 | 0 | 91 | 93 | |
| 07:15 AS 07:30 | 158 | 0 | 1 | 1 | 160 | 163 | |
| 07:30 AS 07:45 | 87 | 0 | 1 | 0 | 88 | 90 | |
| 07:45 AS 08:00 | 117 | 0 | 1 | 0 | 118 | 120 | 464 |
| 08:00 AS 08:15 | 112 | 0 | 0 | 1 | 113 | 114 | 486 |
| 08:15 AS 08:30 | 117 | 0 | 2 | 1 | 120 | 124 | 447 |
| 08:30 AS 08:45 | 107 | 0 | 1 | 1 | 109 | 112 | 469 |
| 08:45 AS 09:00 | 127 | 0 | 1 | 0 | 128 | 130 | 479 |
| 09:00 AS 09:15 | 115 | 0 | 1 | 0 | 116 | 118 | 483 |
| 09:15 AS 09:30 | 107 | 0 | 2 | 1 | 110 | 114 | 473 |
| 09:30 AS 09:45 | 105 | 0 | 3 | 0 | 108 | 113 | 474 |
| 09:45 AS 10:00 | 103 | 0 | 5 | 0 | 108 | 116 | 460 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 19 | 0 | 0 | 0 | 19 | 19 | |
| 07:15 AS 07:30 | 25 | 0 | 0 | 0 | 25 | 25 | |
| 07:30 AS 07:45 | 23 | 0 | 0 | 1 | 24 | 25 | |
| 07:45 AS 08:00 | 29 | 0 | 0 | 0 | 29 | 29 | 98 |
| 08:00 AS 08:15 | 32 | 0 | 2 | 0 | 34 | 37 | 116 |
| 08:15 AS 08:30 | 39 | 0 | 0 | 1 | 40 | 41 | 132 |
| 08:30 AS 08:45 | 40 | 0 | 1 | 0 | 41 | 43 | 150 |
| 08:45 AS 09:00 | 48 | 0 | 1 | 0 | 49 | 51 | 171 |
| 09:00 AS 09:15 | 35 | 0 | 0 | 0 | 35 | 35 | 169 |
| 09:15 AS 09:30 | 34 | 0 | 2 | 1 | 37 | 41 | 169 |
| 09:30 AS 09:45 | 38 | 0 | 2 | 1 | 41 | 45 | 172 |
| 09:45 AS 10:00 | 33 | 0 | 2 | 0 | 35 | 38 | 159 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 389 | 0 | 2 | 11 | 402 | 416 | |
| 07:15 AS 07:30 | 456 | 0 | 3 | 9 | 468 | 482 | |
| 07:30 AS 07:45 | 540 | 0 | 4 | 13 | 557 | 576 | |
| 07:45 AS 08:00 | 432 | 0 | 11 | 15 | 458 | 490 | 1.963 |
| 08:00 AS 08:15 | 437 | 0 | 9 | 13 | 459 | 486 | 2.033 |
| 08:15 AS 08:30 | 421 | 0 | 5 | 9 | 435 | 452 | 2.003 |
| 08:30 AS 08:45 | 380 | 0 | 7 | 11 | 398 | 420 | 1.846 |
| 08:45 AS 09:00 | 411 | 0 | 5 | 12 | 428 | 448 | 1.804 |
| 09:00 AS 09:15 | 379 | 0 | 9 | 9 | 397 | 420 | 1.738 |
| 09:15 AS 09:30 | 351 | 0 | 11 | 5 | 367 | 389 | 1.675 |
| 09:30 AS 09:45 | 345 | 0 | 12 | 8 | 365 | 391 | 1.647 |
| 09:45 AS 10:00 | 323 | 0 | 12 | 7 | 342 | 367 | 1.566 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 358 | 0 | 5 | 12 | 375 | 395 | |
| 07:15 AS 07:30 | 362 | 0 | 9 | 15 | 386 | 415 | |
| 07:30 AS 07:45 | 413 | 0 | 11 | 17 | 441 | 475 | |
| 07:45 AS 08:00 | 401 | 0 | 10 | 12 | 423 | 450 | 1.734 |
| 08:00 AS 08:15 | 376 | 0 | 12 | 11 | 399 | 428 | 1.767 |
| 08:15 AS 08:30 | 324 | 0 | 7 | 15 | 346 | 372 | 1.724 |
| 08:30 AS 08:45 | 309 | 0 | 11 | 13 | 333 | 363 | 1.612 |
| 08:45 AS 09:00 | 311 | 0 | 16 | 8 | 335 | 367 | 1.529 |
| 09:00 AS 09:15 | 315 | 0 | 13 | 13 | 341 | 374 | 1.475 |
| 09:15 AS 09:30 | 267 | 0 | 11 | 6 | 284 | 307 | 1.410 |
| 09:30 AS 09:45 | 280 | 0 | 8 | 7 | 295 | 314 | 1.361 |
| 09:45 AS 10:00 | 278 | 0 | 7 | 3 | 288 | 302 | 1.296 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 101 | 0 | 2 | 1 | 104 | 108 | |
| 07:15 AS 07:30 | 78 | 0 | 2 | 1 | 81 | 85 | |
| 07:30 AS 07:45 | 76 | 0 | 0 | 1 | 77 | 78 | |
| 07:45 AS 08:00 | 73 | 0 | 1 | 1 | 75 | 78 | 349 |
| 08:00 AS 08:15 | 93 | 0 | 1 | 0 | 94 | 96 | 336 |
| 08:15 AS 08:30 | 89 | 0 | 0 | 0 | 89 | 89 | 340 |
| 08:30 AS 08:45 | 100 | 0 | 0 | 0 | 100 | 100 | 362 |
| 08:45 AS 09:00 | 88 | 0 | 0 | 0 | 88 | 88 | 373 |
| 09:00 AS 09:15 | 95 | 0 | 1 | 0 | 96 | 98 | 375 |
| 09:15 AS 09:30 | 106 | 0 | 2 | 0 | 108 | 111 | 397 |
| 09:30 AS 09:45 | 100 | 0 | 1 | 0 | 101 | 103 | 399 |
| 09:45 AS 10:00 | 103 | 0 | 2 | 0 | 105 | 108 | 419 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 47 | 0 | 0 | 0 | 47 | 47 | |
| 07:15 AS 07:30 | 66 | 0 | 2 | 0 | 68 | 71 | |
| 07:30 AS 07:45 | 69 | 0 | 0 | 0 | 69 | 69 | |
| 07:45 AS 08:00 | 52 | 0 | 0 | 0 | 52 | 52 | 239 |
| 08:00 AS 08:15 | 73 | 0 | 0 | 0 | 73 | 73 | 265 |
| 08:15 AS 08:30 | 65 | 0 | 3 | 0 | 68 | 73 | 267 |
| 08:30 AS 08:45 | 56 | 0 | 1 | 0 | 57 | 59 | 256 |
| 08:45 AS 09:00 | 58 | 0 | 0 | 0 | 58 | 58 | 262 |
| 09:00 AS 09:15 | 54 | 0 | 0 | 0 | 54 | 54 | 243 |
| 09:15 AS 09:30 | 50 | 0 | 1 | 0 | 51 | 53 | 223 |
| 09:30 AS 09:45 | 51 | 0 | 0 | 0 | 51 | 51 | 216 |
| 09:45 AS 10:00 | 53 | 0 | 1 | 1 | 55 | 58 | 215 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 307 | 0 | 1 | 11 | 319 | 332 | |
| 07:15 AS 07:30 | 368 | 0 | 2 | 9 | 379 | 391 | |
| 07:30 AS 07:45 | 470 | 0 | 4 | 13 | 487 | 506 | |
| 07:45 AS 08:00 | 364 | 0 | 10 | 15 | 389 | 419 | 1.648 |
| 08:00 AS 08:15 | 376 | 0 | 7 | 12 | 395 | 418 | 1.734 |
| 08:15 AS 08:30 | 358 | 0 | 5 | 9 | 372 | 389 | 1.731 |
| 08:30 AS 08:45 | 325 | 0 | 6 | 11 | 342 | 362 | 1.587 |
| 08:45 AS 09:00 | 352 | 0 | 4 | 12 | 368 | 386 | 1.554 |
| 09:00 AS 09:15 | 328 | 0 | 7 | 9 | 344 | 364 | 1.500 |
| 09:15 AS 09:30 | 307 | 0 | 10 | 5 | 322 | 342 | 1.454 |
| 09:30 AS 09:45 | 292 | 0 | 11 | 8 | 311 | 336 | 1.427 |
| 09:45 AS 10:00 | 282 | 0 | 10 | 7 | 299 | 321 | 1.362 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 112 | 0 | 2 | 1 | 115 | 119 | |
| 07:15 AS 07:30 | 135 | 0 | 3 | 2 | 140 | 147 | |
| 07:30 AS 07:45 | 165 | 0 | 4 | 1 | 170 | 177 | |
| 07:45 AS 08:00 | 221 | 0 | 1 | 1 | 223 | 226 | 668 |
| 08:00 AS 08:15 | 198 | 0 | 2 | 0 | 200 | 203 | 752 |
| 08:15 AS 08:30 | 182 | 0 | 3 | 1 | 186 | 192 | 797 |
| 08:30 AS 08:45 | 179 | 0 | 4 | 1 | 184 | 191 | 811 |
| 08:45 AS 09:00 | 199 | 0 | 2 | 2 | 203 | 208 | 794 |
| 09:00 AS 09:15 | 151 | 0 | 0 | 0 | 151 | 151 | 742 |
| 09:15 AS 09:30 | 110 | 0 | 2 | 0 | 112 | 115 | 665 |
| 09:30 AS 09:45 | 98 | 0 | 3 | 0 | 101 | 106 | 580 |
| 09:45 AS 10:00 | 115 | 0 | 2 | 0 | 117 | 120 | 492 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 33 | 0 | 0 | 0 | 33 | 33 | |
| 07:15 AS 07:30 | 20 | 0 | 0 | 0 | 20 | 20 | |
| 07:30 AS 07:45 | 15 | 0 | 0 | 0 | 15 | 15 | |
| 07:45 AS 08:00 | 18 | 0 | 0 | 1 | 19 | 20 | 88 |
| 08:00 AS 08:15 | 12 | 0 | 0 | 0 | 12 | 12 | 67 |
| 08:15 AS 08:30 | 17 | 0 | 1 | 0 | 18 | 20 | 67 |
| 08:30 AS 08:45 | 21 | 0 | 0 | 0 | 21 | 21 | 73 |
| 08:45 AS 09:00 | 15 | 0 | 3 | 1 | 19 | 25 | 77 |
| 09:00 AS 09:15 | 9 | 0 | 0 | 0 | 9 | 9 | 74 |
| 09:15 AS 09:30 | 18 | 0 | 0 | 0 | 18 | 18 | 73 |
| 09:30 AS 09:45 | 15 | 0 | 2 | 0 | 17 | 20 | 72 |
| 09:45 AS 10:00 | 15 | 0 | 3 | 0 | 18 | 23 | 70 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 82 | 0 | 1 | 0 | 83 | 85 | |
| 07:15 AS 07:30 | 88 | 0 | 1 | 0 | 89 | 91 | |
| 07:30 AS 07:45 | 70 | 0 | 0 | 0 | 70 | 70 | |
| 07:45 AS 08:00 | 68 | 0 | 1 | 0 | 69 | 71 | 316 |
| 08:00 AS 08:15 | 61 | 0 | 2 | 1 | 64 | 68 | 299 |
| 08:15 AS 08:30 | 63 | 0 | 0 | 0 | 63 | 63 | 272 |
| 08:30 AS 08:45 | 55 | 0 | 1 | 0 | 56 | 58 | 259 |
| 08:45 AS 09:00 | 59 | 0 | 1 | 0 | 60 | 62 | 250 |
| 09:00 AS 09:15 | 51 | 0 | 2 | 0 | 53 | 56 | 238 |
| 09:15 AS 09:30 | 44 | 0 | 1 | 0 | 45 | 47 | 222 |
| 09:30 AS 09:45 | 53 | 0 | 1 | 0 | 54 | 56 | 220 |
| 09:45 AS 10:00 | 41 | 0 | 2 | 0 | 43 | 46 | 204 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 367 | 0 | 5 | 12 | 384 | 404 | |
| 07:15 AS 07:30 | 374 | 0 | 9 | 15 | 398 | 427 | |
| 07:30 AS 07:45 | 428 | 0 | 13 | 17 | 458 | 495 | |
| 07:45 AS 08:00 | 419 | 0 | 11 | 12 | 442 | 471 | 1.795 |
| 08:00 AS 08:15 | 393 | 0 | 12 | 11 | 416 | 445 | 1.837 |
| 08:15 AS 08:30 | 349 | 0 | 9 | 15 | 373 | 402 | 1.812 |
| 08:30 AS 08:45 | 338 | 0 | 11 | 13 | 362 | 392 | 1.709 |
| 08:45 AS 09:00 | 334 | 0 | 17 | 8 | 359 | 393 | 1.631 |
| 09:00 AS 09:15 | 346 | 0 | 14 | 13 | 373 | 407 | 1.593 |
| 09:15 AS 09:30 | 289 | 0 | 14 | 6 | 309 | 336 | 1.527 |
| 09:30 AS 09:45 | 310 | 0 | 10 | 7 | 327 | 349 | 1.485 |
| 09:45 AS 10:00 | 309 | 0 | 8 | 3 | 320 | 335 | 1.427 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 163 | 0 | 3 | 0 | 166 | 171 | |
| 07:15 AS 07:30 | 174 | 0 | 4 | 0 | 178 | 184 | |
| 07:30 AS 07:45 | 178 | 0 | 1 | 0 | 179 | 181 | |
| 07:45 AS 08:00 | 219 | 0 | 1 | 1 | 221 | 224 | 759 |
| 08:00 AS 08:15 | 179 | 0 | 4 | 0 | 183 | 189 | 777 |
| 08:15 AS 08:30 | 160 | 0 | 3 | 1 | 164 | 170 | 763 |
| 08:30 AS 08:45 | 130 | 0 | 5 | 1 | 136 | 145 | 727 |
| 08:45 AS 09:00 | 125 | 0 | 5 | 1 | 131 | 140 | 643 |
| 09:00 AS 09:15 | 103 | 0 | 0 | 0 | 103 | 103 | 557 |
| 09:15 AS 09:30 | 83 | 0 | 3 | 0 | 86 | 91 | 478 |
| 09:30 AS 09:45 | 89 | 0 | 5 | 0 | 94 | 102 | 435 |
| 09:45 AS 10:00 | 98 | 0 | 6 | 0 | 104 | 113 | 408 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 19 | 0 | 0 | 0 | 19 | 19 | |
| 07:15 AS 07:30 | 14 | 0 | 0 | 0 | 14 | 14 | |
| 07:30 AS 07:45 | 12 | 0 | 0 | 0 | 12 | 12 | |
| 07:45 AS 08:00 | 16 | 0 | 0 | 0 | 16 | 16 | 61 |
| 08:00 AS 08:15 | 14 | 0 | 0 | 0 | 14 | 14 | 56 |
| 08:15 AS 08:30 | 14 | 0 | 0 | 0 | 14 | 14 | 56 |
| 08:30 AS 08:45 | 9 | 0 | 0 | 0 | 9 | 9 | 53 |
| 08:45 AS 09:00 | 15 | 0 | 0 | 0 | 15 | 15 | 52 |
| 09:00 AS 09:15 | 9 | 0 | 0 | 0 | 9 | 9 | 47 |
| 09:15 AS 09:30 | 13 | 0 | 0 | 0 | 13 | 13 | 46 |
| 09:30 AS 09:45 | 10 | 0 | 0 | 0 | 10 | 10 | 47 |
| 09:45 AS 10:00 | 7 | 0 | 1 | 0 | 8 | 10 | 42 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 64 | 0 | 0 | 0 | 64 | 64 | |
| 07:15 AS 07:30 | 69 | 0 | 0 | 0 | 69 | 69 | |
| 07:30 AS 07:45 | 72 | 0 | 1 | 1 | 74 | 77 | |
| 07:45 AS 08:00 | 88 | 0 | 0 | 1 | 89 | 90 | 300 |
| 08:00 AS 08:15 | 92 | 0 | 1 | 1 | 94 | 97 | 332 |
| 08:15 AS 08:30 | 102 | 0 | 1 | 0 | 103 | 105 | 368 |
| 08:30 AS 08:45 | 125 | 0 | 0 | 0 | 125 | 125 | 416 |
| 08:45 AS 09:00 | 118 | 0 | 1 | 1 | 120 | 123 | 449 |
| 09:00 AS 09:15 | 108 | 0 | 2 | 0 | 110 | 113 | 465 |
| 09:15 AS 09:30 | 89 | 0 | 0 | 0 | 89 | 89 | 450 |
| 09:30 AS 09:45 | 77 | 0 | 1 | 0 | 78 | 80 | 404 |
| 09:45 AS 10:00 | 73 | 0 | 1 | 0 | 74 | 76 | 357 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 106 | 0 | 1 | 1 | 108 | 111 | |
| 07:15 AS 07:30 | 58 | 0 | 2 | 1 | 61 | 65 | |
| 07:30 AS 07:45 | 52 | 0 | 1 | 0 | 53 | 55 | |
| 07:45 AS 08:00 | 53 | 0 | 1 | 1 | 55 | 58 | 288 |
| 08:00 AS 08:15 | 48 | 0 | 3 | 0 | 51 | 56 | 233 |
| 08:15 AS 08:30 | 39 | 0 | 1 | 0 | 40 | 42 | 209 |
| 08:30 AS 08:45 | 39 | 0 | 1 | 0 | 40 | 42 | 196 |
| 08:45 AS 09:00 | 52 | 0 | 0 | 0 | 52 | 52 | 191 |
| 09:00 AS 09:15 | 32 | 0 | 1 | 0 | 33 | 35 | 170 |
| 09:15 AS 09:30 | 30 | 0 | 1 | 0 | 31 | 33 | 161 |
| 09:30 AS 09:45 | 27 | 0 | 2 | 0 | 29 | 32 | 151 |
| 09:45 AS 10:00 | 24 | 0 | 3 | 0 | 27 | 32 | 131 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 51 | 0 | 0 | 0 | 51 | 51 | |
| 07:15 AS 07:30 | 94 | 0 | 0 | 2 | 96 | 98 | |
| 07:30 AS 07:45 | 87 | 0 | 3 | 2 | 92 | 99 | |
| 07:45 AS 08:00 | 63 | 0 | 2 | 1 | 66 | 70 | 318 |
| 08:00 AS 08:15 | 81 | 0 | 1 | 0 | 82 | 84 | 350 |
| 08:15 AS 08:30 | 68 | 0 | 2 | 2 | 72 | 77 | 329 |
| 08:30 AS 08:45 | 53 | 0 | 5 | 0 | 58 | 66 | 296 |
| 08:45 AS 09:00 | 68 | 0 | 5 | 0 | 73 | 81 | 307 |
| 09:00 AS 09:15 | 115 | 0 | 3 | 1 | 119 | 125 | 348 |
| 09:15 AS 09:30 | 72 | 0 | 4 | 2 | 78 | 86 | 357 |
| 09:30 AS 09:45 | 95 | 0 | 3 | 2 | 100 | 107 | 398 |
| 09:45 AS 10:00 | 80 | 0 | 3 | 0 | 83 | 88 | 405 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 131 | 0 | 0 | 1 | 132 | 133 | |
| 07:15 AS 07:30 | 135 | 0 | 0 | 2 | 137 | 139 | |
| 07:30 AS 07:45 | 118 | 0 | 1 | 0 | 119 | 121 | |
| 07:45 AS 08:00 | 105 | 0 | 0 | 3 | 108 | 111 | 504 |
| 08:00 AS 08:15 | 132 | 0 | 1 | 0 | 133 | 135 | 505 |
| 08:15 AS 08:30 | 133 | 0 | 2 | 2 | 137 | 142 | 508 |
| 08:30 AS 08:45 | 126 | 0 | 3 | 0 | 129 | 134 | 521 |
| 08:45 AS 09:00 | 141 | 0 | 3 | 0 | 144 | 149 | 559 |
| 09:00 AS 09:15 | 167 | 0 | 4 | 1 | 172 | 179 | 603 |
| 09:15 AS 09:30 | 126 | 0 | 2 | 2 | 130 | 135 | 596 |
| 09:30 AS 09:45 | 128 | 0 | 2 | 2 | 132 | 137 | 600 |
| 09:45 AS 10:00 | 110 | 0 | 4 | 0 | 114 | 120 | 571 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 90 | 0 | 0 | 0 | 90 | 90 | |
| 07:15 AS 07:30 | 86 | 0 | 2 | 1 | 89 | 93 | |
| 07:30 AS 07:45 | 93 | 0 | 4 | 3 | 100 | 109 | |
| 07:45 AS 08:00 | 99 | 0 | 3 | 0 | 102 | 107 | 399 |
| 08:00 AS 08:15 | 89 | 0 | 0 | 1 | 90 | 91 | 400 |
| 08:15 AS 08:30 | 76 | 0 | 2 | 0 | 78 | 81 | 388 |
| 08:30 AS 08:45 | 91 | 0 | 3 | 0 | 94 | 99 | 377 |
| 08:45 AS 09:00 | 97 | 0 | 3 | 1 | 101 | 107 | 377 |
| 09:00 AS 09:15 | 88 | 0 | 2 | 0 | 90 | 93 | 379 |
| 09:15 AS 09:30 | 65 | 0 | 3 | 0 | 68 | 73 | 371 |
| 09:30 AS 09:45 | 71 | 0 | 4 | 0 | 75 | 81 | 353 |
| 09:45 AS 10:00 | 67 | 0 | 3 | 0 | 70 | 75 | 321 |

ALMOÇO

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 35 | 0 | 1 | 1 | 37 | 40 | |
| 11:15 AS 11:30 | 32 | 0 | 3 | 0 | 35 | 40 | |
| 11:30 AS 11:45 | 31 | 0 | 1 | 0 | 32 | 34 | |
| 11:45 AS 12:00 | 42 | 0 | 1 | 0 | 43 | 45 | 157 |
| 12:00 AS 12:15 | 44 | 0 | 0 | 1 | 45 | 46 | 164 |
| 12:15 AS 12:30 | 39 | 0 | 1 | 0 | 40 | 42 | 166 |
| 12:30 AS 12:45 | 42 | 0 | 2 | 0 | 44 | 47 | 179 |
| 12:45 AS 13:00 | 49 | 0 | 1 | 0 | 50 | 52 | 186 |
| 13:00 AS 13:15 | 36 | 0 | 0 | 0 | 36 | 36 | 176 |
| 13:15 AS 13:30 | 35 | 0 | 0 | 1 | 36 | 37 | 172 |
| 13:30 AS 13:45 | 22 | 0 | 2 | 0 | 24 | 27 | 152 |
| 13:45 AS 14:00 | 40 | 0 | 1 | 0 | 41 | 43 | 143 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 107 | 0 | 1 | 0 | 108 | 110 | |
| 11:15 AS 11:30 | 101 | 0 | 2 | 1 | 104 | 108 | |
| 11:30 AS 11:45 | 113 | 0 | 0 | 0 | 113 | 113 | |
| 11:45 AS 12:00 | 110 | 0 | 1 | 0 | 111 | 113 | 443 |
| 12:00 AS 12:15 | 145 | 0 | 2 | 0 | 147 | 150 | 484 |
| 12:15 AS 12:30 | 166 | 0 | 1 | 1 | 168 | 171 | 546 |
| 12:30 AS 12:45 | 132 | 0 | 1 | 0 | 133 | 135 | 568 |
| 12:45 AS 13:00 | 126 | 0 | 1 | 1 | 128 | 131 | 586 |
| 13:00 AS 13:15 | 118 | 0 | 0 | 0 | 118 | 118 | 554 |
| 13:15 AS 13:30 | 116 | 0 | 1 | 0 | 117 | 119 | 502 |
| 13:30 AS 13:45 | 120 | 0 | 1 | 1 | 122 | 125 | 492 |
| 13:45 AS 14:00 | 119 | 0 | 2 | 2 | 123 | 128 | 489 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 50 | 0 | 2 | 0 | 52 | 55 | |
| 11:15 AS 11:30 | 37 | 0 | 1 | 1 | 39 | 42 | |
| 11:30 AS 11:45 | 45 | 0 | 0 | 0 | 45 | 45 | |
| 11:45 AS 12:00 | 43 | 0 | 1 | 1 | 45 | 48 | 189 |
| 12:00 AS 12:15 | 44 | 0 | 2 | 0 | 46 | 49 | 183 |
| 12:15 AS 12:30 | 36 | 0 | 0 | 0 | 36 | 36 | 178 |
| 12:30 AS 12:45 | 34 | 0 | 1 | 0 | 35 | 37 | 169 |
| 12:45 AS 13:00 | 37 | 0 | 1 | 0 | 38 | 40 | 161 |
| 13:00 AS 13:15 | 41 | 0 | 2 | 0 | 43 | 46 | 158 |
| 13:15 AS 13:30 | 35 | 0 | 1 | 1 | 37 | 40 | 162 |
| 13:30 AS 13:45 | 42 | 0 | 0 | 0 | 42 | 42 | 167 |
| 13:45 AS 14:00 | 40 | 0 | 2 | 1 | 43 | 47 | 175 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 312 | 0 | 11 | 5 | 328 | 350 | |
| 11:15 AS 11:30 | 267 | 0 | 7 | 4 | 278 | 293 | |
| 11:30 AS 11:45 | 282 | 0 | 6 | 6 | 294 | 309 | |
| 11:45 AS 12:00 | 299 | 0 | 7 | 7 | 313 | 331 | 1.282 |
| 12:00 AS 12:15 | 317 | 0 | 11 | 3 | 331 | 351 | 1.283 |
| 12:15 AS 12:30 | 307 | 0 | 9 | 4 | 320 | 338 | 1.328 |
| 12:30 AS 12:45 | 332 | 0 | 7 | 5 | 344 | 360 | 1.378 |
| 12:45 AS 13:00 | 316 | 0 | 6 | 4 | 326 | 339 | 1.387 |
| 13:00 AS 13:15 | 347 | 0 | 9 | 9 | 365 | 388 | 1.424 |
| 13:15 AS 13:30 | 359 | 0 | 12 | 8 | 379 | 405 | 1.491 |
| 13:30 AS 13:45 | 341 | 0 | 7 | 5 | 353 | 369 | 1.500 |
| 13:45 AS 14:00 | 345 | 0 | 9 | 4 | 358 | 376 | 1.537 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 295 | 0 | 9 | 4 | 308 | 326 | |
| 11:15 AS 11:30 | 261 | 0 | 6 | 5 | 272 | 286 | |
| 11:30 AS 11:45 | 259 | 0 | 9 | 6 | 274 | 294 | |
| 11:45 AS 12:00 | 280 | 0 | 7 | 7 | 294 | 312 | 1.217 |
| 12:00 AS 12:15 | 342 | 0 | 7 | 4 | 353 | 368 | 1.259 |
| 12:15 AS 12:30 | 368 | 0 | 5 | 5 | 378 | 391 | 1.363 |
| 12:30 AS 12:45 | 341 | 0 | 8 | 6 | 355 | 373 | 1.443 |
| 12:45 AS 13:00 | 412 | 0 | 7 | 5 | 424 | 440 | 1.571 |
| 13:00 AS 13:15 | 314 | 0 | 7 | 5 | 326 | 342 | 1.545 |
| 13:15 AS 13:30 | 332 | 0 | 5 | 4 | 341 | 353 | 1.507 |
| 13:30 AS 13:45 | 280 | 0 | 6 | 5 | 291 | 305 | 1.439 |
| 13:45 AS 14:00 | 302 | 0 | 5 | 7 | 314 | 329 | 1.328 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 101 | 0 | 1 | 0 | 102 | 104 | |
| 11:15 AS 11:30 | 97 | 0 | 2 | 0 | 99 | 102 | |
| 11:30 AS 11:45 | 105 | 0 | 0 | 0 | 105 | 105 | |
| 11:45 AS 12:00 | 109 | 0 | 2 | 0 | 111 | 114 | 425 |
| 12:00 AS 12:15 | 100 | 0 | 0 | 0 | 100 | 100 | 421 |
| 12:15 AS 12:30 | 98 | 0 | 2 | 0 | 100 | 103 | 422 |
| 12:30 AS 12:45 | 102 | 0 | 0 | 0 | 102 | 102 | 419 |
| 12:45 AS 13:00 | 104 | 0 | 1 | 0 | 105 | 107 | 412 |
| 13:00 AS 13:15 | 98 | 0 | 1 | 0 | 99 | 101 | 412 |
| 13:15 AS 13:30 | 89 | 0 | 0 | 0 | 89 | 89 | 398 |
| 13:30 AS 13:45 | 90 | 0 | 1 | 0 | 91 | 93 | 389 |
| 13:45 AS 14:00 | 93 | 0 | 1 | 0 | 94 | 96 | 378 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 30 | 0 | 0 | 0 | 30 | 30 | |
| 11:15 AS 11:30 | 44 | 0 | 1 | 0 | 45 | 47 | |
| 11:30 AS 11:45 | 47 | 0 | 0 | 1 | 48 | 49 | |
| 11:45 AS 12:00 | 38 | 0 | 1 | 0 | 39 | 41 | 166 |
| 12:00 AS 12:15 | 47 | 0 | 0 | 0 | 47 | 47 | 183 |
| 12:15 AS 12:30 | 53 | 0 | 1 | 0 | 54 | 56 | 192 |
| 12:30 AS 12:45 | 49 | 0 | 0 | 0 | 49 | 49 | 192 |
| 12:45 AS 13:00 | 52 | 0 | 1 | 0 | 53 | 55 | 206 |
| 13:00 AS 13:15 | 55 | 0 | 1 | 0 | 56 | 58 | 217 |
| 13:15 AS 13:30 | 57 | 0 | 0 | 0 | 57 | 57 | 218 |
| 13:30 AS 13:45 | 57 | 0 | 1 | 0 | 58 | 60 | 229 |
| 13:45 AS 14:00 | 59 | 0 | 1 | 1 | 61 | 64 | 238 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 269 | 0 | 11 | 5 | 285 | 307 | |
| 11:15 AS 11:30 | 235 | 0 | 6 | 3 | 244 | 256 | |
| 11:30 AS 11:45 | 236 | 0 | 3 | 6 | 245 | 256 | |
| 11:45 AS 12:00 | 247 | 0 | 6 | 6 | 259 | 274 | 1.092 |
| 12:00 AS 12:15 | 262 | 0 | 10 | 3 | 275 | 293 | 1.079 |
| 12:15 AS 12:30 | 262 | 0 | 9 | 4 | 275 | 293 | 1.115 |
| 12:30 AS 12:45 | 271 | 0 | 5 | 5 | 281 | 294 | 1.153 |
| 12:45 AS 13:00 | 261 | 0 | 5 | 4 | 270 | 282 | 1.161 |
| 13:00 AS 13:15 | 282 | 0 | 7 | 8 | 297 | 316 | 1.183 |
| 13:15 AS 13:30 | 315 | 0 | 11 | 6 | 332 | 355 | 1.245 |
| 13:30 AS 13:45 | 294 | 0 | 4 | 5 | 303 | 314 | 1.266 |
| 13:45 AS 14:00 | 293 | 0 | 5 | 3 | 301 | 312 | 1.296 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 75 | 0 | 3 | 0 | 78 | 83 | |
| 11:15 AS 11:30 | 73 | 0 | 2 | 1 | 76 | 80 | |
| 11:30 AS 11:45 | 87 | 0 | 1 | 2 | 90 | 94 | |
| 11:45 AS 12:00 | 99 | 0 | 2 | 0 | 101 | 104 | 360 |
| 12:00 AS 12:15 | 97 | 0 | 1 | 0 | 98 | 100 | 377 |
| 12:15 AS 12:30 | 99 | 0 | 2 | 1 | 102 | 106 | 403 |
| 12:30 AS 12:45 | 100 | 0 | 3 | 0 | 103 | 108 | 417 |
| 12:45 AS 13:00 | 115 | 0 | 2 | 0 | 117 | 120 | 433 |
| 13:00 AS 13:15 | 110 | 0 | 2 | 0 | 112 | 115 | 449 |
| 13:15 AS 13:30 | 98 | 0 | 3 | 1 | 102 | 108 | 450 |
| 13:30 AS 13:45 | 110 | 0 | 1 | 2 | 113 | 117 | 459 |
| 13:45 AS 14:00 | 109 | 0 | 0 | 1 | 110 | 111 | 450 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 14 | 0 | 0 | 0 | 14 | 14 | |
| 11:15 AS 11:30 | 21 | 0 | 0 | 0 | 21 | 21 | |
| 11:30 AS 11:45 | 18 | 0 | 0 | 1 | 19 | 20 | |
| 11:45 AS 12:00 | 20 | 0 | 1 | 0 | 21 | 23 | 78 |
| 12:00 AS 12:15 | 16 | 0 | 0 | 0 | 16 | 16 | 80 |
| 12:15 AS 12:30 | 28 | 0 | 1 | 1 | 30 | 33 | 91 |
| 12:30 AS 12:45 | 23 | 0 | 2 | 0 | 25 | 28 | 99 |
| 12:45 AS 13:00 | 23 | 0 | 1 | 0 | 24 | 26 | 102 |
| 13:00 AS 13:15 | 20 | 0 | 1 | 1 | 22 | 25 | 111 |
| 13:15 AS 13:30 | 20 | 0 | 0 | 1 | 21 | 22 | 100 |
| 13:30 AS 13:45 | 19 | 0 | 1 | 1 | 21 | 24 | 96 |
| 13:45 AS 14:00 | 17 | 0 | 3 | 1 | 21 | 27 | 97 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 43 | 0 | 0 | 0 | 43 | 43 | |
| 11:15 AS 11:30 | 32 | 0 | 1 | 1 | 34 | 37 | |
| 11:30 AS 11:45 | 46 | 0 | 3 | 0 | 49 | 54 | |
| 11:45 AS 12:00 | 52 | 0 | 1 | 1 | 54 | 57 | 190 |
| 12:00 AS 12:15 | 55 | 0 | 1 | 0 | 56 | 58 | 204 |
| 12:15 AS 12:30 | 45 | 0 | 0 | 0 | 45 | 45 | 213 |
| 12:30 AS 12:45 | 61 | 0 | 2 | 0 | 63 | 66 | 225 |
| 12:45 AS 13:00 | 55 | 0 | 1 | 0 | 56 | 58 | 226 |
| 13:00 AS 13:15 | 65 | 0 | 2 | 1 | 68 | 72 | 241 |
| 13:15 AS 13:30 | 44 | 0 | 1 | 2 | 47 | 51 | 246 |
| 13:30 AS 13:45 | 47 | 0 | 3 | 0 | 50 | 55 | 235 |
| 13:45 AS 14:00 | 52 | 0 | 4 | 1 | 57 | 64 | 241 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 330 | 0 | 10 | 5 | 345 | 365 | |
| 11:15 AS 11:30 | 293 | 0 | 9 | 5 | 307 | 326 | |
| 11:30 AS 11:45 | 290 | 0 | 10 | 6 | 306 | 327 | |
| 11:45 AS 12:00 | 322 | 0 | 8 | 7 | 337 | 356 | 1.374 |
| 12:00 AS 12:15 | 386 | 0 | 7 | 5 | 398 | 414 | 1.422 |
| 12:15 AS 12:30 | 407 | 0 | 6 | 5 | 418 | 432 | 1.529 |
| 12:30 AS 12:45 | 383 | 0 | 10 | 6 | 399 | 420 | 1.622 |
| 12:45 AS 13:00 | 461 | 0 | 8 | 5 | 474 | 491 | 1.757 |
| 13:00 AS 13:15 | 350 | 0 | 7 | 5 | 362 | 378 | 1.721 |
| 13:15 AS 13:30 | 367 | 0 | 5 | 5 | 377 | 390 | 1.678 |
| 13:30 AS 13:45 | 302 | 0 | 8 | 5 | 315 | 332 | 1.590 |
| 13:45 AS 14:00 | 342 | 0 | 6 | 7 | 355 | 371 | 1.470 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 71 | 0 | 2 | 0 | 73 | 76 | |
| 11:15 AS 11:30 | 58 | 0 | 3 | 2 | 63 | 70 | |
| 11:30 AS 11:45 | 79 | 0 | 4 | 3 | 86 | 95 | |
| 11:45 AS 12:00 | 92 | 0 | 3 | 1 | 96 | 102 | 342 |
| 12:00 AS 12:15 | 86 | 0 | 2 | 0 | 88 | 91 | 357 |
| 12:15 AS 12:30 | 92 | 0 | 3 | 1 | 96 | 102 | 389 |
| 12:30 AS 12:45 | 103 | 0 | 4 | 0 | 107 | 113 | 407 |
| 12:45 AS 13:00 | 101 | 0 | 3 | 0 | 104 | 109 | 414 |
| 13:00 AS 13:15 | 100 | 0 | 4 | 2 | 106 | 114 | 437 |
| 13:15 AS 13:30 | 72 | 0 | 4 | 3 | 79 | 88 | 424 |
| 13:30 AS 13:45 | 89 | 0 | 2 | 3 | 94 | 100 | 411 |
| 13:45 AS 14:00 | 95 | 0 | 6 | 3 | 104 | 116 | 418 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 11 | 0 | 0 | 0 | 11 | 11 | |
| 11:15 AS 11:30 | 12 | 0 | 0 | 0 | 12 | 12 | |
| 11:30 AS 11:45 | 10 | 0 | 0 | 0 | 10 | 10 | |
| 11:45 AS 12:00 | 13 | 0 | 0 | 0 | 13 | 13 | 46 |
| 12:00 AS 12:15 | 11 | 0 | 0 | 0 | 11 | 11 | 46 |
| 12:15 AS 12:30 | 15 | 0 | 1 | 0 | 16 | 18 | 52 |
| 12:30 AS 12:45 | 12 | 0 | 0 | 0 | 12 | 12 | 54 |
| 12:45 AS 13:00 | 21 | 0 | 1 | 0 | 22 | 24 | 64 |
| 13:00 AS 13:15 | 14 | 0 | 0 | 0 | 14 | 14 | 67 |
| 13:15 AS 13:30 | 8 | 0 | 0 | 0 | 8 | 8 | 58 |
| 13:30 AS 13:45 | 10 | 0 | 1 | 0 | 11 | 13 | 58 |
| 13:45 AS 14:00 | 11 | 0 | 1 | 0 | 12 | 14 | 48 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 61 | 0 | 1 | 0 | 62 | 64 | |
| 11:15 AS 11:30 | 68 | 0 | 0 | 0 | 68 | 68 | |
| 11:30 AS 11:45 | 72 | 0 | 1 | 0 | 73 | 75 | |
| 11:45 AS 12:00 | 79 | 0 | 1 | 0 | 80 | 82 | 288 |
| 12:00 AS 12:15 | 82 | 0 | 0 | 0 | 82 | 82 | 306 |
| 12:15 AS 12:30 | 80 | 0 | 0 | 1 | 81 | 82 | 320 |
| 12:30 AS 12:45 | 81 | 0 | 3 | 0 | 84 | 89 | 334 |
| 12:45 AS 13:00 | 92 | 0 | 1 | 0 | 93 | 95 | 347 |
| 13:00 AS 13:15 | 95 | 0 | 1 | 0 | 96 | 98 | 363 |
| 13:15 AS 13:30 | 90 | 0 | 0 | 1 | 91 | 92 | 373 |
| 13:30 AS 13:45 | 87 | 0 | 3 | 0 | 90 | 95 | 379 |
| 13:45 AS 14:00 | 83 | 0 | 1 | 0 | 84 | 86 | 370 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 30 | 0 | 1 | 0 | 31 | 33 | |
| 11:15 AS 11:30 | 34 | 0 | 1 | 0 | 35 | 37 | |
| 11:30 AS 11:45 | 38 | 0 | 0 | 0 | 38 | 38 | |
| 11:45 AS 12:00 | 51 | 0 | 0 | 0 | 51 | 51 | 158 |
| 12:00 AS 12:15 | 63 | 0 | 0 | 0 | 63 | 63 | 189 |
| 12:15 AS 12:30 | 70 | 0 | 2 | 0 | 72 | 75 | 227 |
| 12:30 AS 12:45 | 58 | 0 | 0 | 0 | 58 | 58 | 247 |
| 12:45 AS 13:00 | 54 | 0 | 2 | 0 | 56 | 59 | 255 |
| 13:00 AS 13:15 | 49 | 0 | 1 | 0 | 50 | 52 | 244 |
| 13:15 AS 13:30 | 47 | 0 | 1 | 0 | 48 | 50 | 218 |
| 13:30 AS 13:45 | 42 | 0 | 0 | 0 | 42 | 42 | 202 |
| 13:45 AS 14:00 | 47 | 0 | 1 | 0 | 48 | 50 | 193 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 97 | 0 | 6 | 1 | 104 | 114 | |
| 11:15 AS 11:30 | 62 | 0 | 4 | 1 | 67 | 74 | |
| 11:30 AS 11:45 | 58 | 0 | 3 | 1 | 62 | 68 | |
| 11:45 AS 12:00 | 55 | 0 | 6 | 0 | 61 | 70 | 326 |
| 12:00 AS 12:15 | 54 | 0 | 4 | 1 | 59 | 66 | 278 |
| 12:15 AS 12:30 | 53 | 0 | 2 | 0 | 55 | 58 | 262 |
| 12:30 AS 12:45 | 53 | 0 | 5 | 1 | 59 | 68 | 262 |
| 12:45 AS 13:00 | 39 | 0 | 1 | 1 | 41 | 44 | 235 |
| 13:00 AS 13:15 | 57 | 0 | 1 | 0 | 58 | 60 | 229 |
| 13:15 AS 13:30 | 45 | 0 | 0 | 0 | 45 | 45 | 216 |
| 13:30 AS 13:45 | 49 | 0 | 0 | 0 | 49 | 49 | 197 |
| 13:45 AS 14:00 | 61 | 0 | 3 | 0 | 64 | 69 | 222 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 107 | 0 | 4 | 1 | 112 | 119 | |
| 11:15 AS 11:30 | 110 | 0 | 3 | 0 | 113 | 118 | |
| 11:30 AS 11:45 | 113 | 0 | 3 | 0 | 116 | 121 | |
| 11:45 AS 12:00 | 118 | 0 | 5 | 0 | 123 | 131 | 488 |
| 12:00 AS 12:15 | 129 | 0 | 3 | 0 | 132 | 137 | 505 |
| 12:15 AS 12:30 | 132 | 0 | 2 | 0 | 134 | 137 | 525 |
| 12:30 AS 12:45 | 125 | 0 | 4 | 0 | 129 | 135 | 539 |
| 12:45 AS 13:00 | 112 | 0 | 2 | 0 | 114 | 117 | 526 |
| 13:00 AS 13:15 | 121 | 0 | 2 | 0 | 123 | 126 | 515 |
| 13:15 AS 13:30 | 120 | 0 | 0 | 0 | 120 | 120 | 498 |
| 13:30 AS 13:45 | 123 | 0 | 2 | 0 | 125 | 128 | 491 |
| 13:45 AS 14:00 | 118 | 0 | 3 | 0 | 121 | 126 | 500 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 51 | 0 | 3 | 0 | 54 | 59 | |
| 11:15 AS 11:30 | 54 | 0 | 2 | 1 | 57 | 61 | |
| 11:30 AS 11:45 | 55 | 0 | 1 | 1 | 57 | 60 | |
| 11:45 AS 12:00 | 67 | 0 | 2 | 0 | 69 | 72 | 251 |
| 12:00 AS 12:15 | 70 | 0 | 1 | 1 | 72 | 75 | 267 |
| 12:15 AS 12:30 | 71 | 0 | 2 | 0 | 73 | 76 | 282 |
| 12:30 AS 12:45 | 67 | 0 | 4 | 1 | 72 | 79 | 302 |
| 12:45 AS 13:00 | 73 | 0 | 2 | 1 | 76 | 80 | 310 |
| 13:00 AS 13:15 | 80 | 0 | 1 | 0 | 81 | 83 | 318 |
| 13:15 AS 13:30 | 62 | 0 | 0 | 0 | 62 | 62 | 304 |
| 13:30 AS 13:45 | 55 | 0 | 1 | 0 | 56 | 58 | 282 |
| 13:45 AS 14:00 | 73 | 0 | 2 | 0 | 75 | 78 | 280 |

TARDE

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 41 | 0 | 0 | 1 | 42 | 43 | |
| 17:15 AS 17:30 | 49 | 0 | 1 | 0 | 50 | 52 | |
| 17:30 AS 17:45 | 45 | 0 | 0 | 0 | 45 | 45 | |
| 17:45 AS 18:00 | 48 | 0 | 0 | 1 | 49 | 50 | 190 |
| 18:00 AS 18:15 | 51 | 0 | 0 | 0 | 51 | 51 | 198 |
| 18:15 AS 18:30 | 48 | 0 | 2 | 0 | 50 | 53 | 199 |
| 18:30 AS 18:45 | 42 | 0 | 0 | 1 | 43 | 44 | 198 |
| 18:45 AS 19:00 | 30 | 0 | 1 | 0 | 31 | 33 | 181 |
| 19:00 AS 19:15 | 37 | 0 | 0 | 1 | 38 | 39 | 169 |
| 19:15 AS 19:30 | 33 | 0 | 0 | 0 | 33 | 33 | 149 |
| 19:30 AS 19:45 | 31 | 0 | 1 | 0 | 32 | 34 | 138 |
| 19:45 AS 20:00 | 29 | 0 | 0 | 0 | 29 | 29 | 135 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 183 | 0 | 0 | 0 | 183 | 183 | |
| 17:15 AS 17:30 | 169 | 0 | 2 | 1 | 172 | 176 | |
| 17:30 AS 17:45 | 198 | 0 | 1 | 1 | 200 | 203 | |
| 17:45 AS 18:00 | 204 | 0 | 3 | 0 | 207 | 212 | 773 |
| 18:00 AS 18:15 | 189 | 0 | 2 | 0 | 191 | 194 | 784 |
| 18:15 AS 18:30 | 181 | 0 | 3 | 2 | 186 | 193 | 801 |
| 18:30 AS 18:45 | 185 | 0 | 0 | 1 | 186 | 187 | 785 |
| 18:45 AS 19:00 | 182 | 0 | 1 | 1 | 184 | 187 | 760 |
| 19:00 AS 19:15 | 156 | 0 | 1 | 0 | 157 | 159 | 725 |
| 19:15 AS 19:30 | 128 | 0 | 1 | 0 | 129 | 131 | 663 |
| 19:30 AS 19:45 | 102 | 0 | 1 | 1 | 104 | 107 | 582 |
| 19:45 AS 20:00 | 78 | 0 | 0 | 0 | 78 | 78 | 474 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 23 | 0 | 0 | 1 | 24 | 25 | |
| 17:15 AS 17:30 | 19 | 0 | 0 | 0 | 19 | 19 | |
| 17:30 AS 17:45 | 21 | 0 | 0 | 0 | 21 | 21 | |
| 17:45 AS 18:00 | 15 | 0 | 1 | 0 | 16 | 18 | 83 |
| 18:00 AS 18:15 | 17 | 0 | 1 | 0 | 18 | 20 | 77 |
| 18:15 AS 18:30 | 14 | 0 | 2 | 0 | 16 | 19 | 77 |
| 18:30 AS 18:45 | 11 | 0 | 0 | 0 | 11 | 11 | 67 |
| 18:45 AS 19:00 | 32 | 0 | 1 | 0 | 33 | 35 | 84 |
| 19:00 AS 19:15 | 24 | 0 | 0 | 0 | 24 | 24 | 89 |
| 19:15 AS 19:30 | 15 | 0 | 0 | 0 | 15 | 15 | 85 |
| 19:30 AS 19:45 | 13 | 0 | 0 | 0 | 13 | 13 | 87 |
| 19:45 AS 20:00 | 16 | 0 | 0 | 0 | 16 | 16 | 68 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 310 | 0 | 1 | 5 | 316 | 323 | |
| 17:15 AS 17:30 | 369 | 0 | 1 | 15 | 385 | 402 | |
| 17:30 AS 17:45 | 335 | 0 | 2 | 13 | 350 | 366 | |
| 17:45 AS 18:00 | 325 | 0 | 3 | 11 | 339 | 355 | 1.445 |
| 18:00 AS 18:15 | 342 | 0 | 1 | 10 | 353 | 365 | 1.487 |
| 18:15 AS 18:30 | 352 | 0 | 2 | 9 | 363 | 375 | 1.460 |
| 18:30 AS 18:45 | 312 | 0 | 3 | 12 | 327 | 344 | 1.438 |
| 18:45 AS 19:00 | 543 | 0 | 2 | 19 | 564 | 586 | 1.669 |
| 19:00 AS 19:15 | 302 | 0 | 0 | 11 | 313 | 324 | 1.629 |
| 19:15 AS 19:30 | 278 | 0 | 2 | 7 | 287 | 297 | 1.551 |
| 19:30 AS 19:45 | 233 | 0 | 4 | 8 | 245 | 259 | 1.466 |
| 19:45 AS 20:00 | 237 | 0 | 3 | 5 | 245 | 255 | 1.135 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 368 | 0 | 2 | 8 | 378 | 389 | |
| 17:15 AS 17:30 | 434 | 0 | 3 | 9 | 446 | 460 | |
| 17:30 AS 17:45 | 361 | 0 | 5 | 11 | 377 | 396 | |
| 17:45 AS 18:00 | 380 | 0 | 4 | 12 | 396 | 414 | 1.658 |
| 18:00 AS 18:15 | 401 | 0 | 3 | 10 | 414 | 429 | 1.698 |
| 18:15 AS 18:30 | 390 | 0 | 1 | 12 | 403 | 417 | 1.655 |
| 18:30 AS 18:45 | 386 | 0 | 2 | 11 | 399 | 413 | 1.672 |
| 18:45 AS 19:00 | 361 | 0 | 1 | 13 | 375 | 390 | 1.648 |
| 19:00 AS 19:15 | 326 | 0 | 3 | 11 | 340 | 356 | 1.575 |
| 19:15 AS 19:30 | 341 | 0 | 2 | 9 | 352 | 364 | 1.522 |
| 19:30 AS 19:45 | 275 | 0 | 6 | 11 | 292 | 312 | 1.421 |
| 19:45 AS 20:00 | 266 | 0 | 4 | 7 | 277 | 290 | 1.322 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 129 | 0 | 0 | 1 | 130 | 131 | |
| 17:15 AS 17:30 | 123 | 0 | 0 | 1 | 124 | 125 | |
| 17:30 AS 17:45 | 121 | 0 | 1 | 0 | 122 | 124 | |
| 17:45 AS 18:00 | 120 | 0 | 0 | 1 | 121 | 122 | 502 |
| 18:00 AS 18:15 | 116 | 0 | 0 | 1 | 117 | 118 | 489 |
| 18:15 AS 18:30 | 110 | 0 | 2 | 3 | 115 | 121 | 485 |
| 18:30 AS 18:45 | 119 | 0 | 1 | 2 | 122 | 126 | 487 |
| 18:45 AS 19:00 | 122 | 0 | 0 | 1 | 123 | 124 | 489 |
| 19:00 AS 19:15 | 121 | 0 | 0 | 1 | 122 | 123 | 494 |
| 19:15 AS 19:30 | 119 | 0 | 1 | 2 | 122 | 126 | 498 |
| 19:30 AS 19:45 | 102 | 0 | 1 | 0 | 103 | 105 | 477 |
| 19:45 AS 20:00 | 91 | 0 | 1 | 2 | 94 | 98 | 451 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 51 | 0 | 1 | 0 | 52 | 54 | |
| 17:15 AS 17:30 | 53 | 0 | 1 | 0 | 54 | 56 | |
| 17:30 AS 17:45 | 55 | 0 | 1 | 0 | 56 | 58 | |
| 17:45 AS 18:00 | 47 | 0 | 1 | 0 | 48 | 50 | 216 |
| 18:00 AS 18:15 | 45 | 0 | 0 | 0 | 45 | 45 | 208 |
| 18:15 AS 18:30 | 49 | 0 | 2 | 0 | 51 | 54 | 206 |
| 18:30 AS 18:45 | 55 | 0 | 1 | 0 | 56 | 58 | 206 |
| 18:45 AS 19:00 | 58 | 0 | 1 | 0 | 59 | 61 | 217 |
| 19:00 AS 19:15 | 50 | 0 | 0 | 0 | 50 | 50 | 222 |
| 19:15 AS 19:30 | 46 | 0 | 0 | 0 | 46 | 46 | 214 |
| 19:30 AS 19:45 | 47 | 0 | 1 | 0 | 48 | 50 | 206 |
| 19:45 AS 20:00 | 50 | 0 | 0 | 0 | 50 | 50 | 196 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 266 | 0 | 0 | 5 | 271 | 276 | |
| 17:15 AS 17:30 | 333 | 0 | 1 | 15 | 349 | 366 | |
| 17:30 AS 17:45 | 288 | 0 | 2 | 13 | 303 | 319 | |
| 17:45 AS 18:00 | 295 | 0 | 2 | 11 | 308 | 322 | 1.283 |
| 18:00 AS 18:15 | 309 | 0 | 1 | 10 | 320 | 332 | 1.338 |
| 18:15 AS 18:30 | 327 | 0 | 1 | 9 | 337 | 348 | 1.320 |
| 18:30 AS 18:45 | 277 | 0 | 3 | 12 | 292 | 309 | 1.310 |
| 18:45 AS 19:00 | 502 | 0 | 1 | 19 | 522 | 543 | 1.530 |
| 19:00 AS 19:15 | 243 | 0 | 0 | 10 | 253 | 263 | 1.462 |
| 19:15 AS 19:30 | 237 | 0 | 1 | 7 | 245 | 254 | 1.368 |
| 19:30 AS 19:45 | 181 | 0 | 4 | 7 | 192 | 205 | 1.264 |
| 19:45 AS 20:00 | 195 | 0 | 1 | 4 | 200 | 206 | 927 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 123 | 0 | 0 | 0 | 123 | 123 | |
| 17:15 AS 17:30 | 98 | 0 | 1 | 0 | 99 | 101 | |
| 17:30 AS 17:45 | 112 | 0 | 1 | 2 | 115 | 119 | |
| 17:45 AS 18:00 | 104 | 0 | 2 | 1 | 107 | 111 | 453 |
| 18:00 AS 18:15 | 121 | 0 | 1 | 0 | 122 | 124 | 454 |
| 18:15 AS 18:30 | 101 | 0 | 0 | 0 | 101 | 101 | 454 |
| 18:30 AS 18:45 | 103 | 0 | 1 | 1 | 105 | 108 | 443 |
| 18:45 AS 19:00 | 95 | 0 | 1 | 2 | 98 | 102 | 434 |
| 19:00 AS 19:15 | 67 | 0 | 1 | 1 | 69 | 72 | 382 |
| 19:15 AS 19:30 | 71 | 0 | 0 | 0 | 71 | 71 | 352 |
| 19:30 AS 19:45 | 70 | 0 | 2 | 2 | 74 | 79 | 323 |
| 19:45 AS 20:00 | 52 | 0 | 1 | 1 | 54 | 57 | 278 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 24 | 0 | 0 | 0 | 24 | 24 | |
| 17:15 AS 17:30 | 22 | 0 | 0 | 0 | 22 | 22 | |
| 17:30 AS 17:45 | 27 | 0 | 0 | 0 | 27 | 27 | |
| 17:45 AS 18:00 | 19 | 0 | 0 | 0 | 19 | 19 | 92 |
| 18:00 AS 18:15 | 26 | 0 | 0 | 1 | 27 | 28 | 96 |
| 18:15 AS 18:30 | 33 | 0 | 0 | 0 | 33 | 33 | 107 |
| 18:30 AS 18:45 | 22 | 0 | 0 | 1 | 23 | 24 | 104 |
| 18:45 AS 19:00 | 21 | 0 | 0 | 0 | 21 | 21 | 106 |
| 19:00 AS 19:15 | 28 | 0 | 2 | 0 | 30 | 33 | 111 |
| 19:15 AS 19:30 | 22 | 0 | 0 | 0 | 22 | 22 | 100 |
| 19:30 AS 19:45 | 22 | 0 | 1 | 0 | 23 | 25 | 101 |
| 19:45 AS 20:00 | 20 | 0 | 1 | 0 | 21 | 23 | 102 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 44 | 0 | 2 | 0 | 46 | 49 | |
| 17:15 AS 17:30 | 36 | 0 | 0 | 0 | 36 | 36 | |
| 17:30 AS 17:45 | 47 | 0 | 0 | 0 | 47 | 47 | |
| 17:45 AS 18:00 | 30 | 0 | 1 | 0 | 31 | 33 | 165 |
| 18:00 AS 18:15 | 33 | 0 | 0 | 0 | 33 | 33 | 149 |
| 18:15 AS 18:30 | 25 | 0 | 1 | 0 | 26 | 28 | 140 |
| 18:30 AS 18:45 | 35 | 0 | 0 | 0 | 35 | 35 | 128 |
| 18:45 AS 19:00 | 41 | 0 | 1 | 0 | 42 | 44 | 139 |
| 19:00 AS 19:15 | 59 | 0 | 0 | 1 | 60 | 61 | 167 |
| 19:15 AS 19:30 | 41 | 0 | 1 | 0 | 42 | 44 | 183 |
| 19:30 AS 19:45 | 52 | 0 | 0 | 1 | 53 | 54 | 202 |
| 19:45 AS 20:00 | 42 | 0 | 2 | 1 | 45 | 49 | 208 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 409 | 0 | 2 | 9 | 420 | 432 | |
| 17:15 AS 17:30 | 483 | 0 | 4 | 9 | 496 | 511 | |
| 17:30 AS 17:45 | 406 | 0 | 5 | 11 | 422 | 441 | |
| 17:45 AS 18:00 | 428 | 0 | 4 | 13 | 445 | 464 | 1.848 |
| 18:00 AS 18:15 | 452 | 0 | 3 | 10 | 465 | 480 | 1.895 |
| 18:15 AS 18:30 | 438 | 0 | 3 | 12 | 453 | 470 | 1.854 |
| 18:30 AS 18:45 | 428 | 0 | 2 | 12 | 442 | 457 | 1.870 |
| 18:45 AS 19:00 | 391 | 0 | 2 | 13 | 406 | 422 | 1.828 |
| 19:00 AS 19:15 | 363 | 0 | 3 | 12 | 378 | 395 | 1.743 |
| 19:15 AS 19:30 | 374 | 0 | 2 | 9 | 385 | 397 | 1.671 |
| 19:30 AS 19:45 | 306 | 0 | 7 | 11 | 324 | 346 | 1.559 |
| 19:45 AS 20:00 | 295 | 0 | 4 | 7 | 306 | 319 | 1.456 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 109 | 0 | 2 | 0 | 111 | 114 | |
| 17:15 AS 17:30 | 69 | 0 | 1 | 0 | 70 | 72 | |
| 17:30 AS 17:45 | 96 | 0 | 1 | 2 | 99 | 103 | |
| 17:45 AS 18:00 | 61 | 0 | 3 | 1 | 65 | 71 | 359 |
| 18:00 AS 18:15 | 89 | 0 | 1 | 0 | 90 | 92 | 336 |
| 18:15 AS 18:30 | 72 | 0 | 1 | 0 | 73 | 75 | 339 |
| 18:30 AS 18:45 | 77 | 0 | 1 | 0 | 78 | 80 | 316 |
| 18:45 AS 19:00 | 79 | 0 | 2 | 2 | 83 | 88 | 334 |
| 19:00 AS 19:15 | 90 | 0 | 1 | 2 | 93 | 97 | 339 |
| 19:15 AS 19:30 | 65 | 0 | 1 | 0 | 66 | 68 | 332 |
| 19:30 AS 19:45 | 70 | 0 | 3 | 1 | 74 | 80 | 332 |
| 19:45 AS 20:00 | 44 | 0 | 4 | 2 | 50 | 58 | 302 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 14 | 0 | 0 | 0 | 14 | 14 | |
| 17:15 AS 17:30 | 19 | 0 | 0 | 0 | 19 | 19 | |
| 17:30 AS 17:45 | 17 | 0 | 1 | 0 | 18 | 20 | |
| 17:45 AS 18:00 | 17 | 0 | 0 | 0 | 17 | 17 | 70 |
| 18:00 AS 18:15 | 14 | 0 | 1 | 0 | 15 | 17 | 72 |
| 18:15 AS 18:30 | 11 | 0 | 0 | 0 | 11 | 11 | 64 |
| 18:30 AS 18:45 | 10 | 0 | 0 | 0 | 10 | 10 | 55 |
| 18:45 AS 19:00 | 17 | 0 | 0 | 0 | 17 | 17 | 55 |
| 19:00 AS 19:15 | 15 | 0 | 0 | 2 | 17 | 19 | 57 |
| 19:15 AS 19:30 | 23 | 0 | 2 | 0 | 25 | 28 | 74 |
| 19:30 AS 19:45 | 16 | 0 | 0 | 1 | 17 | 18 | 82 |
| 19:45 AS 20:00 | 11 | 0 | 1 | 0 | 12 | 14 | 79 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 82 | 0 | 2 | 0 | 84 | 87 | |
| 17:15 AS 17:30 | 87 | 0 | 0 | 0 | 87 | 87 | |
| 17:30 AS 17:45 | 90 | 0 | 1 | 0 | 91 | 93 | |
| 17:45 AS 18:00 | 92 | 0 | 0 | 0 | 92 | 92 | 359 |
| 18:00 AS 18:15 | 91 | 0 | 0 | 1 | 92 | 93 | 365 |
| 18:15 AS 18:30 | 87 | 0 | 0 | 0 | 87 | 87 | 365 |
| 18:30 AS 18:45 | 83 | 0 | 1 | 1 | 85 | 88 | 360 |
| 18:45 AS 19:00 | 78 | 0 | 1 | 0 | 79 | 81 | 348 |
| 19:00 AS 19:15 | 64 | 0 | 1 | 0 | 65 | 67 | 322 |
| 19:15 AS 19:30 | 69 | 0 | 0 | 0 | 69 | 69 | 304 |
| 19:30 AS 19:45 | 74 | 0 | 0 | 2 | 76 | 78 | 294 |
| 19:45 AS 20:00 | 70 | 0 | 0 | 0 | 70 | 70 | 284 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 58 | 0 | 0 | 0 | 58 | 58 | |
| 17:15 AS 17:30 | 56 | 0 | 0 | 0 | 56 | 56 | |
| 17:30 AS 17:45 | 60 | 0 | 0 | 0 | 60 | 60 | |
| 17:45 AS 18:00 | 53 | 0 | 0 | 0 | 53 | 53 | 227 |
| 18:00 AS 18:15 | 46 | 0 | 0 | 0 | 46 | 46 | 215 |
| 18:15 AS 18:30 | 49 | 0 | 0 | 0 | 49 | 49 | 208 |
| 18:30 AS 18:45 | 41 | 0 | 0 | 0 | 41 | 41 | 189 |
| 18:45 AS 19:00 | 42 | 0 | 0 | 0 | 42 | 42 | 178 |
| 19:00 AS 19:15 | 37 | 0 | 0 | 1 | 38 | 39 | 171 |
| 19:15 AS 19:30 | 33 | 0 | 1 | 0 | 34 | 36 | 158 |
| 19:30 AS 19:45 | 37 | 0 | 0 | 0 | 37 | 37 | 154 |
| 19:45 AS 20:00 | 29 | 0 | 1 | 0 | 30 | 32 | 143 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 95 | 0 | 0 | 2 | 97 | 99 | |
| 17:15 AS 17:30 | 72 | 0 | 0 | 0 | 72 | 72 | |
| 17:30 AS 17:45 | 92 | 0 | 2 | 2 | 96 | 101 | |
| 17:45 AS 18:00 | 89 | 0 | 2 | 4 | 95 | 102 | 374 |
| 18:00 AS 18:15 | 119 | 0 | 0 | 1 | 120 | 121 | 396 |
| 18:15 AS 18:30 | 120 | 0 | 3 | 1 | 124 | 130 | 454 |
| 18:30 AS 18:45 | 125 | 0 | 0 | 1 | 126 | 127 | 480 |
| 18:45 AS 19:00 | 90 | 0 | 3 | 4 | 97 | 106 | 483 |
| 19:00 AS 19:15 | 95 | 0 | 0 | 5 | 100 | 105 | 467 |
| 19:15 AS 19:30 | 71 | 0 | 0 | 4 | 75 | 79 | 417 |
| 19:30 AS 19:45 | 77 | 0 | 1 | 0 | 78 | 80 | 369 |
| 19:45 AS 20:00 | 66 | 0 | 1 | 2 | 69 | 73 | 336 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 145 | 0 | 1 | 2 | 148 | 152 | |
| 17:15 AS 17:30 | 137 | 0 | 0 | 0 | 137 | 137 | |
| 17:30 AS 17:45 | 154 | 0 | 2 | 2 | 158 | 163 | |
| 17:45 AS 18:00 | 155 | 0 | 2 | 4 | 161 | 168 | 620 |
| 18:00 AS 18:15 | 158 | 0 | 0 | 2 | 160 | 162 | 630 |
| 18:15 AS 18:30 | 160 | 0 | 2 | 1 | 163 | 167 | 660 |
| 18:30 AS 18:45 | 171 | 0 | 1 | 2 | 174 | 178 | 675 |
| 18:45 AS 19:00 | 152 | 0 | 3 | 4 | 159 | 168 | 674 |
| 19:00 AS 19:15 | 131 | 0 | 1 | 6 | 138 | 146 | 658 |
| 19:15 AS 19:30 | 126 | 0 | 0 | 4 | 130 | 134 | 625 |
| 19:30 AS 19:45 | 133 | 0 | 1 | 1 | 135 | 138 | 585 |
| 19:45 AS 20:00 | 122 | 0 | 2 | 2 | 126 | 131 | 548 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 90 | 0 | 0 | 0 | 90 | 90 | |
| 17:15 AS 17:30 | 78 | 0 | 0 | 0 | 78 | 78 | |
| 17:30 AS 17:45 | 88 | 0 | 1 | 0 | 89 | 91 | |
| 17:45 AS 18:00 | 79 | 0 | 0 | 0 | 79 | 79 | 338 |
| 18:00 AS 18:15 | 98 | 0 | 0 | 0 | 98 | 98 | 346 |
| 18:15 AS 18:30 | 96 | 0 | 1 | 0 | 97 | 99 | 366 |
| 18:30 AS 18:45 | 78 | 0 | 0 | 0 | 78 | 78 | 354 |
| 18:45 AS 19:00 | 58 | 0 | 1 | 0 | 59 | 61 | 335 |
| 19:00 AS 19:15 | 65 | 0 | 0 | 0 | 65 | 65 | 302 |
| 19:15 AS 19:30 | 47 | 0 | 1 | 0 | 48 | 50 | 253 |
| 19:30 AS 19:45 | 55 | 0 | 0 | 1 | 56 | 57 | 232 |
| 19:45 AS 20:00 | 43 | 0 | 0 | 0 | 43 | 43 | 215 |

Nós 70, 32 e 33 - Dia 23/10/2019

MANHÃ

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|----------------|-------------|-------|----------------|----------------|---------------|
| 07:00 AS 07:15 | 2696 | | 07:00 AS 07:15 | | |
| 07:15 AS 07:30 | 2988 | | 07:15 AS 07:30 | | |
| 07:30 AS 07:45 | 3246 | | 07:30 AS 07:45 | | |
| 07:45 AS 08:00 | 3118 | 12048 | 07:45 AS 08:00 | 07:00 AS 08:00 | |
| 08:00 AS 08:15 | 3060 | 12412 | 08:00 AS 08:15 | 07:15 AS 08:15 | |
| 08:15 AS 08:30 | 2873 | 12297 | 08:15 AS 08:30 | 07:30 AS 08:30 | |
| 08:30 AS 08:45 | 2764 | 11815 | 08:30 AS 08:45 | 07:45 AS 08:45 | |
| 08:45 AS 09:00 | 2903 | 11600 | 08:45 AS 09:00 | 08:00 AS 09:00 | |
| 09:00 AS 09:15 | 2773 | 11313 | 09:00 AS 09:15 | 08:15 AS 09:15 | |
| 09:15 AS 09:30 | 2419 | 10859 | 09:15 AS 09:30 | 08:30 AS 09:30 | |
| 09:30 AS 09:45 | 2464 | 10559 | 09:30 AS 09:45 | 08:45 AS 09:45 | MÁXIMO |
| 09:45 AS 10:00 | 2377 | 10033 | 09:45 AS 10:00 | 09:00 AS 10:00 | 12412 |

FHP= 0,96

ALMOÇO

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|----------------|-------------|--------|----------------|----------------|---------------|
| 11:00 AS 11:15 | 2.298 | | 11:00 AS 11:15 | | |
| 11:15 AS 11:30 | 2.074 | | 11:15 AS 11:30 | | |
| 11:30 AS 11:45 | 2.163 | | 11:30 AS 11:45 | | |
| 11:45 AS 12:00 | 2.334 | 8.868 | 11:45 AS 12:00 | 11:00 AS 12:00 | |
| 12:00 AS 12:15 | 2.514 | 9.083 | 12:00 AS 12:15 | 11:15 AS 12:15 | |
| 12:15 AS 12:30 | 2.590 | 9.599 | 12:15 AS 12:30 | 11:30 AS 12:30 | |
| 12:30 AS 12:45 | 2.570 | 10.006 | 12:30 AS 12:45 | 11:45 AS 12:45 | |
| 12:45 AS 13:00 | 2.663 | 10.335 | 12:45 AS 13:00 | 12:00 AS 13:00 | |
| 13:00 AS 13:15 | 2.537 | 10.358 | 13:00 AS 13:15 | 12:15 AS 13:15 | |
| 13:15 AS 13:30 | 2.487 | 10.256 | 13:15 AS 13:30 | 12:30 AS 13:30 | |
| 13:30 AS 13:45 | 2.343 | 10.029 | 13:30 AS 13:45 | 12:45 AS 13:45 | MÁXIMO |
| 13:45 AS 14:00 | 2.501 | 9.868 | 13:45 AS 14:00 | 13:00 AS 14:00 | 10358 |

FHP= 0,97

TARDE

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|----------------|-------------|--------|----------------|----------------|---------------|
| 17:00 AS 17:15 | 2.665 | | 17:00 AS 17:15 | | |
| 17:15 AS 17:30 | 2.844 | | 17:15 AS 17:30 | | |
| 17:30 AS 17:45 | 2.792 | | 17:30 AS 17:45 | | |
| 17:45 AS 18:00 | 2.749 | 11.049 | 17:45 AS 18:00 | 17:00 AS 18:00 | |
| 18:00 AS 18:15 | 2.844 | 11.229 | 18:00 AS 18:15 | 17:15 AS 18:15 | |
| 18:15 AS 18:30 | 2.826 | 11.211 | 18:15 AS 18:30 | 17:30 AS 18:30 | |
| 18:30 AS 18:45 | 2.714 | 11.133 | 18:30 AS 18:45 | 17:45 AS 18:45 | |
| 18:45 AS 19:00 | 3.105 | 11.489 | 18:45 AS 19:00 | 18:00 AS 19:00 | |
| 19:00 AS 19:15 | 2.434 | 11.079 | 19:00 AS 19:15 | 18:15 AS 19:15 | |
| 19:15 AS 19:30 | 2.261 | 10.513 | 19:15 AS 19:30 | 18:30 AS 19:30 | |
| 19:30 AS 19:45 | 2.073 | 9.872 | 19:30 AS 19:45 | 18:45 AS 19:45 | MÁXIMO |
| 19:45 AS 20:00 | 1.887 | 8.654 | 19:45 AS 20:00 | 19:00 AS 20:00 | 11489 |

FHP= 0,93

| MANHÃ | | | | |
|----------------|----------------|------|--------|------|
| 08:00 AS 08:15 | | | | |
| | Volume simples | V.C. | % V.C. | fhp |
| MOV. 1 > 2 | 65 | 3 | 4,6% | 0,96 |
| MOV. 1 > 3 | 479 | 5 | 1,0% | |
| MOV. 1 > 4 | 112 | 3 | 2,7% | |
| MOV. 2 > 4 | 1.942 | 77 | 4,0% | |
| MOV. 4 > 2 | 1.649 | 97 | 5,9% | |
| MOV. 4 > 3 | 327 | 7 | 2,1% | |
| MOV. 12 > 11 | 262 | 2 | 0,8% | |
| MOV. 12 > 14 | 1.650 | 72 | 4,4% | |
| MOV. 13 > 11 | 733 | 14 | 1,9% | |
| MOV. 13 > 12 | 66 | 1 | 1,5% | |
| MOV. 13 > 14 | 292 | 5 | 1,7% | |
| MOV. 14 > 12 | 1.714 | 100 | 5,8% | |
| MOV. 23 > 21 | 761 | 11 | 1,4% | |
| MOV. 23 > 22 | 56 | 0 | 0,0% | |
| MOV. 24 > 21 | 326 | 5 | 1,5% | |
| MOV. 24 > 22 | 220 | 9 | 4,1% | |
| MOV. 24 > 23 | 336 | 11 | 3,3% | |
| MOV. 34 > 32 | 497 | 7 | 1,4% | |
| MOV. 35 > 32 | 381 | 14 | 3,7% | |

| ALMOÇO | | | | |
|----------------|----------------|------|--------|------|
| 13:00 AS 13:15 | | | | |
| | Volume simples | V.C. | % V.C. | fhp |
| MOV. 1 > 2 | 170 | 4 | 2,4% | 0,97 |
| MOV. 1 > 3 | 547 | 5 | 0,9% | |
| MOV. 1 > 4 | 152 | 4 | 2,6% | |
| MOV. 2 > 4 | 1.355 | 53 | 3,9% | |
| MOV. 4 > 2 | 1.483 | 48 | 3,2% | |
| MOV. 4 > 3 | 406 | 4 | 1,0% | |
| MOV. 12 > 11 | 212 | 3 | 1,4% | |
| MOV. 12 > 14 | 1.123 | 47 | 4,2% | |
| MOV. 13 > 11 | 434 | 10 | 2,3% | |
| MOV. 13 > 12 | 101 | 7 | 6,9% | |
| MOV. 13 > 14 | 232 | 6 | 2,6% | |
| MOV. 14 > 12 | 1.653 | 52 | 3,1% | |
| MOV. 23 > 21 | 413 | 17 | 4,1% | |
| MOV. 23 > 22 | 64 | 2 | 3,1% | |
| MOV. 24 > 21 | 354 | 6 | 1,7% | |
| MOV. 24 > 22 | 236 | 5 | 2,1% | |
| MOV. 24 > 23 | 213 | 11 | 5,2% | |
| MOV. 34 > 32 | 500 | 10 | 2,0% | |
| MOV. 35 > 32 | 302 | 11 | 3,6% | |

| TARDE | | | | |
|----------------|----------------|------|--------|------|
| 18:45 AS 19:00 | | | | |
| | Volume simples | V.C. | % V.C. | fhp |
| MOV. 1 > 2 | 175 | 4 | 2,3% | 0,93 |
| MOV. 1 > 3 | 747 | 10 | 1,3% | |
| MOV. 1 > 4 | 78 | 4 | 5,1% | |
| MOV. 2 > 4 | 1.607 | 58 | 3,6% | |
| MOV. 4 > 2 | 1.591 | 53 | 3,3% | |
| MOV. 4 > 3 | 477 | 10 | 2,1% | |
| MOV. 12 > 11 | 211 | 4 | 1,9% | |
| MOV. 12 > 14 | 1.471 | 56 | 3,8% | |
| MOV. 13 > 11 | 426 | 6 | 1,4% | |
| MOV. 13 > 12 | 104 | 2 | 1,9% | |
| MOV. 13 > 14 | 136 | 2 | 1,5% | |
| MOV. 14 > 12 | 1.766 | 57 | 3,2% | |
| MOV. 23 > 21 | 324 | 7 | 2,2% | |
| MOV. 23 > 22 | 53 | 1 | 1,9% | |
| MOV. 24 > 21 | 343 | 4 | 1,2% | |
| MOV. 24 > 22 | 178 | 0 | 0,0% | |
| MOV. 24 > 23 | 467 | 13 | 2,8% | |
| MOV. 34 > 32 | 656 | 15 | 2,3% | |
| MOV. 35 > 32 | 332 | 2 | 0,6% | |

Nós 70, 32 e 33 - Dia 24/10/2019

MANHÃ

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 12 | 0 | 0 | 0 | 12 | 12 | |
| 07:15 AS 07:30 | 14 | 0 | 0 | 0 | 14 | 14 | |
| 07:30 AS 07:45 | 17 | 0 | 2 | 0 | 19 | 22 | |
| 07:45 AS 08:00 | 26 | 0 | 0 | 0 | 26 | 26 | 74 |
| 08:00 AS 08:15 | 20 | 0 | 0 | 0 | 20 | 20 | 82 |
| 08:15 AS 08:30 | 29 | 0 | 0 | 0 | 29 | 29 | 97 |
| 08:30 AS 08:45 | 22 | 0 | 1 | 0 | 23 | 25 | 100 |
| 08:45 AS 09:00 | 35 | 0 | 1 | 0 | 36 | 38 | 111 |
| 09:00 AS 09:15 | 27 | 0 | 0 | 0 | 27 | 27 | 118 |
| 09:15 AS 09:30 | 27 | 0 | 3 | 0 | 30 | 35 | 124 |
| 09:30 AS 09:45 | 35 | 0 | 6 | 0 | 41 | 50 | 149 |
| 09:45 AS 10:00 | 29 | 0 | 1 | 0 | 30 | 32 | 143 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 93 | 0 | 0 | 0 | 93 | 93 | |
| 07:15 AS 07:30 | 151 | 0 | 2 | 1 | 154 | 158 | |
| 07:30 AS 07:45 | 97 | 0 | 1 | 0 | 98 | 100 | |
| 07:45 AS 08:00 | 114 | 0 | 0 | 1 | 115 | 116 | 467 |
| 08:00 AS 08:15 | 95 | 0 | 2 | 1 | 98 | 102 | 476 |
| 08:15 AS 08:30 | 138 | 0 | 4 | 0 | 142 | 148 | 466 |
| 08:30 AS 08:45 | 112 | 0 | 3 | 0 | 115 | 120 | 486 |
| 08:45 AS 09:00 | 133 | 0 | 2 | 0 | 135 | 138 | 508 |
| 09:00 AS 09:15 | 129 | 0 | 0 | 0 | 129 | 129 | 535 |
| 09:15 AS 09:30 | 101 | 0 | 3 | 1 | 105 | 111 | 497 |
| 09:30 AS 09:45 | 109 | 0 | 4 | 0 | 113 | 119 | 497 |
| 09:45 AS 10:00 | 109 | 0 | 4 | 0 | 113 | 119 | 478 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 10 | 0 | 0 | 0 | 10 | 10 | |
| 07:15 AS 07:30 | 22 | 0 | 0 | 0 | 22 | 22 | |
| 07:30 AS 07:45 | 19 | 0 | 0 | 0 | 19 | 19 | |
| 07:45 AS 08:00 | 30 | 0 | 0 | 0 | 30 | 30 | 81 |
| 08:00 AS 08:15 | 28 | 0 | 1 | 1 | 30 | 33 | 104 |
| 08:15 AS 08:30 | 33 | 0 | 0 | 0 | 33 | 33 | 115 |
| 08:30 AS 08:45 | 32 | 0 | 0 | 0 | 32 | 32 | 128 |
| 08:45 AS 09:00 | 42 | 0 | 2 | 0 | 44 | 47 | 145 |
| 09:00 AS 09:15 | 46 | 0 | 0 | 1 | 47 | 48 | 160 |
| 09:15 AS 09:30 | 30 | 0 | 2 | 0 | 32 | 35 | 162 |
| 09:30 AS 09:45 | 27 | 0 | 2 | 0 | 29 | 32 | 162 |
| 09:45 AS 10:00 | 44 | 0 | 1 | 0 | 45 | 47 | 162 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 417 | 0 | 1 | 12 | 430 | 444 | |
| 07:15 AS 07:30 | 412 | 0 | 4 | 8 | 424 | 438 | |
| 07:30 AS 07:45 | 507 | 0 | 7 | 11 | 525 | 547 | |
| 07:45 AS 08:00 | 373 | 0 | 10 | 11 | 394 | 420 | 1.848 |
| 08:00 AS 08:15 | 429 | 0 | 6 | 11 | 446 | 466 | 1.871 |
| 08:15 AS 08:30 | 379 | 0 | 9 | 12 | 400 | 426 | 1.858 |
| 08:30 AS 08:45 | 442 | 0 | 6 | 11 | 459 | 479 | 1.791 |
| 08:45 AS 09:00 | 424 | 0 | 6 | 9 | 439 | 457 | 1.828 |
| 09:00 AS 09:15 | 332 | 0 | 4 | 10 | 346 | 362 | 1.724 |
| 09:15 AS 09:30 | 339 | 0 | 14 | 4 | 357 | 382 | 1.680 |
| 09:30 AS 09:45 | 320 | 0 | 10 | 10 | 340 | 365 | 1.566 |
| 09:45 AS 10:00 | 329 | 0 | 6 | 4 | 339 | 352 | 1.461 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 369 | 0 | 5 | 12 | 386 | 406 | |
| 07:15 AS 07:30 | 348 | 0 | 4 | 9 | 361 | 376 | |
| 07:30 AS 07:45 | 390 | 0 | 12 | 16 | 418 | 452 | |
| 07:45 AS 08:00 | 347 | 0 | 4 | 12 | 363 | 381 | 1.615 |
| 08:00 AS 08:15 | 372 | 0 | 20 | 11 | 403 | 444 | 1.653 |
| 08:15 AS 08:30 | 318 | 0 | 10 | 11 | 339 | 365 | 1.642 |
| 08:30 AS 08:45 | 310 | 0 | 10 | 9 | 329 | 353 | 1.543 |
| 08:45 AS 09:00 | 280 | 0 | 7 | 9 | 296 | 316 | 1.478 |
| 09:00 AS 09:15 | 320 | 0 | 10 | 8 | 338 | 361 | 1.395 |
| 09:15 AS 09:30 | 279 | 0 | 12 | 8 | 299 | 325 | 1.355 |
| 09:30 AS 09:45 | 321 | 0 | 12 | 9 | 342 | 369 | 1.371 |
| 09:45 AS 10:00 | 286 | 0 | 6 | 4 | 296 | 309 | 1.364 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 108 | 0 | 2 | 2 | 112 | 117 | |
| 07:15 AS 07:30 | 98 | 0 | 0 | 1 | 99 | 100 | |
| 07:30 AS 07:45 | 80 | 0 | 2 | 0 | 82 | 85 | |
| 07:45 AS 08:00 | 77 | 0 | 0 | 0 | 77 | 77 | 379 |
| 08:00 AS 08:15 | 85 | 0 | 2 | 0 | 87 | 90 | 352 |
| 08:15 AS 08:30 | 76 | 0 | 0 | 0 | 76 | 76 | 328 |
| 08:30 AS 08:45 | 100 | 0 | 2 | 0 | 102 | 105 | 348 |
| 08:45 AS 09:00 | 97 | 0 | 1 | 0 | 98 | 100 | 371 |
| 09:00 AS 09:15 | 94 | 0 | 2 | 0 | 96 | 99 | 380 |
| 09:15 AS 09:30 | 99 | 0 | 2 | 0 | 101 | 104 | 408 |
| 09:30 AS 09:45 | 90 | 0 | 0 | 0 | 90 | 90 | 393 |
| 09:45 AS 10:00 | 84 | 0 | 0 | 0 | 84 | 84 | 377 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 54 | 0 | 0 | 0 | 54 | 54 | |
| 07:15 AS 07:30 | 57 | 0 | 1 | 0 | 58 | 60 | |
| 07:30 AS 07:45 | 59 | 0 | 1 | 0 | 60 | 62 | |
| 07:45 AS 08:00 | 55 | 0 | 0 | 0 | 55 | 55 | 230 |
| 08:00 AS 08:15 | 58 | 0 | 2 | 0 | 60 | 63 | 239 |
| 08:15 AS 08:30 | 64 | 0 | 1 | 0 | 65 | 67 | 246 |
| 08:30 AS 08:45 | 68 | 0 | 2 | 0 | 70 | 73 | 258 |
| 08:45 AS 09:00 | 63 | 0 | 0 | 0 | 63 | 63 | 266 |
| 09:00 AS 09:15 | 62 | 0 | 1 | 0 | 63 | 65 | 267 |
| 09:15 AS 09:30 | 60 | 0 | 1 | 0 | 61 | 63 | 263 |
| 09:30 AS 09:45 | 58 | 0 | 1 | 0 | 59 | 61 | 251 |
| 09:45 AS 10:00 | 64 | 0 | 1 | 0 | 65 | 67 | 254 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 333 | 0 | 0 | 12 | 345 | 357 | |
| 07:15 AS 07:30 | 326 | 0 | 3 | 8 | 337 | 350 | |
| 07:30 AS 07:45 | 435 | 0 | 7 | 11 | 453 | 475 | |
| 07:45 AS 08:00 | 303 | 0 | 9 | 11 | 323 | 348 | 1.529 |
| 08:00 AS 08:15 | 367 | 0 | 4 | 11 | 382 | 399 | 1.571 |
| 08:15 AS 08:30 | 314 | 0 | 8 | 12 | 334 | 358 | 1.579 |
| 08:30 AS 08:45 | 385 | 0 | 4 | 11 | 400 | 417 | 1.522 |
| 08:45 AS 09:00 | 364 | 0 | 5 | 9 | 378 | 395 | 1.569 |
| 09:00 AS 09:15 | 279 | 0 | 2 | 10 | 291 | 304 | 1.474 |
| 09:15 AS 09:30 | 293 | 0 | 13 | 4 | 310 | 334 | 1.449 |
| 09:30 AS 09:45 | 269 | 0 | 8 | 10 | 287 | 309 | 1.341 |
| 09:45 AS 10:00 | 286 | 0 | 4 | 4 | 294 | 304 | 1.251 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 114 | 0 | 2 | 1 | 117 | 121 | |
| 07:15 AS 07:30 | 137 | 0 | 4 | 2 | 143 | 151 | |
| 07:30 AS 07:45 | 159 | 0 | 3 | 1 | 163 | 169 | |
| 07:45 AS 08:00 | 219 | 0 | 2 | 1 | 222 | 226 | 667 |
| 08:00 AS 08:15 | 199 | 0 | 1 | 0 | 200 | 202 | 747 |
| 08:15 AS 08:30 | 185 | 0 | 2 | 2 | 189 | 194 | 790 |
| 08:30 AS 08:45 | 180 | 0 | 3 | 1 | 184 | 190 | 811 |
| 08:45 AS 09:00 | 201 | 0 | 1 | 1 | 203 | 206 | 791 |
| 09:00 AS 09:15 | 155 | 0 | 1 | 0 | 156 | 158 | 747 |
| 09:15 AS 09:30 | 113 | 0 | 2 | 0 | 115 | 118 | 671 |
| 09:30 AS 09:45 | 102 | 0 | 3 | 0 | 105 | 110 | 591 |
| 09:45 AS 10:00 | 116 | 0 | 1 | 0 | 117 | 119 | 504 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 36 | 0 | 0 | 1 | 37 | 38 | |
| 07:15 AS 07:30 | 22 | 0 | 0 | 1 | 23 | 24 | |
| 07:30 AS 07:45 | 18 | 0 | 3 | 0 | 21 | 26 | |
| 07:45 AS 08:00 | 18 | 0 | 0 | 0 | 18 | 18 | 106 |
| 08:00 AS 08:15 | 15 | 0 | 1 | 1 | 17 | 20 | 87 |
| 08:15 AS 08:30 | 17 | 0 | 0 | 0 | 17 | 17 | 80 |
| 08:30 AS 08:45 | 21 | 0 | 0 | 1 | 22 | 23 | 78 |
| 08:45 AS 09:00 | 16 | 0 | 2 | 0 | 18 | 21 | 81 |
| 09:00 AS 09:15 | 13 | 0 | 0 | 0 | 13 | 13 | 74 |
| 09:15 AS 09:30 | 16 | 0 | 1 | 0 | 17 | 19 | 76 |
| 09:30 AS 09:45 | 16 | 0 | 4 | 0 | 20 | 26 | 79 |
| 09:45 AS 10:00 | 15 | 0 | 1 | 1 | 17 | 20 | 77 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 84 | 0 | 1 | 0 | 85 | 87 | |
| 07:15 AS 07:30 | 86 | 0 | 1 | 0 | 87 | 89 | |
| 07:30 AS 07:45 | 72 | 0 | 0 | 0 | 72 | 72 | |
| 07:45 AS 08:00 | 70 | 0 | 1 | 0 | 71 | 73 | 320 |
| 08:00 AS 08:15 | 62 | 0 | 2 | 0 | 64 | 67 | 300 |
| 08:15 AS 08:30 | 65 | 0 | 1 | 0 | 66 | 68 | 279 |
| 08:30 AS 08:45 | 57 | 0 | 2 | 0 | 59 | 62 | 269 |
| 08:45 AS 09:00 | 60 | 0 | 1 | 0 | 61 | 63 | 259 |
| 09:00 AS 09:15 | 53 | 0 | 2 | 0 | 55 | 58 | 250 |
| 09:15 AS 09:30 | 46 | 0 | 1 | 0 | 47 | 49 | 231 |
| 09:30 AS 09:45 | 51 | 0 | 2 | 0 | 53 | 56 | 225 |
| 09:45 AS 10:00 | 43 | 0 | 2 | 0 | 45 | 48 | 211 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 381 | 0 | 5 | 12 | 398 | 418 | |
| 07:15 AS 07:30 | 362 | 0 | 4 | 9 | 375 | 390 | |
| 07:30 AS 07:45 | 407 | 0 | 14 | 16 | 437 | 474 | |
| 07:45 AS 08:00 | 373 | 0 | 4 | 12 | 389 | 407 | 1.689 |
| 08:00 AS 08:15 | 392 | 0 | 20 | 11 | 423 | 464 | 1.735 |
| 08:15 AS 08:30 | 347 | 0 | 10 | 11 | 368 | 394 | 1.739 |
| 08:30 AS 08:45 | 332 | 0 | 11 | 9 | 352 | 378 | 1.643 |
| 08:45 AS 09:00 | 315 | 0 | 8 | 9 | 332 | 353 | 1.589 |
| 09:00 AS 09:15 | 347 | 0 | 10 | 8 | 365 | 388 | 1.513 |
| 09:15 AS 09:30 | 306 | 0 | 15 | 8 | 329 | 360 | 1.478 |
| 09:30 AS 09:45 | 356 | 0 | 18 | 9 | 383 | 419 | 1.520 |
| 09:45 AS 10:00 | 315 | 0 | 7 | 4 | 326 | 341 | 1.507 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 161 | 0 | 2 | 0 | 163 | 166 | |
| 07:15 AS 07:30 | 158 | 0 | 5 | 2 | 165 | 175 | |
| 07:30 AS 07:45 | 157 | 0 | 5 | 1 | 163 | 172 | |
| 07:45 AS 08:00 | 209 | 0 | 3 | 1 | 213 | 219 | 731 |
| 08:00 AS 08:15 | 173 | 0 | 2 | 1 | 176 | 180 | 745 |
| 08:15 AS 08:30 | 153 | 0 | 2 | 2 | 157 | 162 | 732 |
| 08:30 AS 08:45 | 146 | 0 | 4 | 2 | 152 | 160 | 721 |
| 08:45 AS 09:00 | 163 | 0 | 2 | 1 | 166 | 170 | 672 |
| 09:00 AS 09:15 | 120 | 0 | 1 | 0 | 121 | 123 | 615 |
| 09:15 AS 09:30 | 84 | 0 | 3 | 0 | 87 | 92 | 544 |
| 09:30 AS 09:45 | 76 | 0 | 8 | 0 | 84 | 96 | 480 |
| 09:45 AS 10:00 | 80 | 0 | 1 | 1 | 82 | 85 | 395 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 21 | 0 | 0 | 0 | 21 | 21 | |
| 07:15 AS 07:30 | 15 | 0 | 0 | 0 | 15 | 15 | |
| 07:30 AS 07:45 | 13 | 0 | 0 | 0 | 13 | 13 | |
| 07:45 AS 08:00 | 15 | 0 | 0 | 0 | 15 | 15 | 64 |
| 08:00 AS 08:15 | 12 | 0 | 0 | 0 | 12 | 12 | 55 |
| 08:15 AS 08:30 | 14 | 0 | 0 | 0 | 14 | 14 | 54 |
| 08:30 AS 08:45 | 10 | 0 | 0 | 0 | 10 | 10 | 51 |
| 08:45 AS 09:00 | 13 | 0 | 0 | 0 | 13 | 13 | 49 |
| 09:00 AS 09:15 | 9 | 0 | 0 | 0 | 9 | 9 | 46 |
| 09:15 AS 09:30 | 11 | 0 | 2 | 0 | 13 | 16 | 48 |
| 09:30 AS 09:45 | 9 | 0 | 0 | 0 | 9 | 9 | 47 |
| 09:45 AS 10:00 | 10 | 0 | 1 | 0 | 11 | 13 | 47 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 73 | 0 | 1 | 1 | 75 | 78 | |
| 07:15 AS 07:30 | 87 | 0 | 0 | 0 | 87 | 87 | |
| 07:30 AS 07:45 | 92 | 0 | 1 | 0 | 93 | 95 | |
| 07:45 AS 08:00 | 98 | 0 | 0 | 0 | 98 | 98 | 357 |
| 08:00 AS 08:15 | 103 | 0 | 2 | 0 | 105 | 108 | 388 |
| 08:15 AS 08:30 | 114 | 0 | 1 | 0 | 115 | 117 | 417 |
| 08:30 AS 08:45 | 112 | 0 | 1 | 0 | 113 | 115 | 437 |
| 08:45 AS 09:00 | 114 | 0 | 2 | 0 | 116 | 119 | 458 |
| 09:00 AS 09:15 | 101 | 0 | 0 | 0 | 101 | 101 | 451 |
| 09:15 AS 09:30 | 91 | 0 | 1 | 0 | 92 | 94 | 428 |
| 09:30 AS 09:45 | 93 | 0 | 1 | 0 | 94 | 96 | 409 |
| 09:45 AS 10:00 | 94 | 0 | 3 | 0 | 97 | 102 | 392 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 07:00 AS 07:15 | 103 | 0 | 1 | 1 | 105 | 108 | |
| 07:15 AS 07:30 | 60 | 0 | 1 | 2 | 63 | 67 | |
| 07:30 AS 07:45 | 53 | 0 | 3 | 0 | 56 | 61 | |
| 07:45 AS 08:00 | 52 | 0 | 1 | 1 | 54 | 57 | 291 |
| 08:00 AS 08:15 | 49 | 0 | 2 | 0 | 51 | 54 | 238 |
| 08:15 AS 08:30 | 42 | 0 | 1 | 0 | 43 | 45 | 216 |
| 08:30 AS 08:45 | 43 | 0 | 1 | 0 | 44 | 46 | 201 |
| 08:45 AS 09:00 | 55 | 0 | 2 | 1 | 58 | 62 | 206 |
| 09:00 AS 09:15 | 38 | 0 | 1 | 0 | 39 | 41 | 193 |
| 09:15 AS 09:30 | 34 | 0 | 1 | 1 | 36 | 39 | 187 |
| 09:30 AS 09:45 | 30 | 0 | 2 | 0 | 32 | 35 | 176 |
| 09:45 AS 10:00 | 27 | 0 | 1 | 0 | 28 | 30 | 144 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 54 | 0 | 0 | 0 | 54 | 54 | |
| 07:15 AS 07:30 | 74 | 0 | 1 | 2 | 77 | 81 | |
| 07:30 AS 07:45 | 67 | 0 | 1 | 0 | 68 | 70 | |
| 07:45 AS 08:00 | 47 | 0 | 0 | 0 | 47 | 47 | 251 |
| 08:00 AS 08:15 | 47 | 0 | 0 | 1 | 48 | 49 | 246 |
| 08:15 AS 08:30 | 20 | 0 | 2 | 0 | 22 | 25 | 191 |
| 08:30 AS 08:45 | 52 | 0 | 6 | 0 | 58 | 67 | 188 |
| 08:45 AS 09:00 | 38 | 0 | 1 | 0 | 39 | 41 | 182 |
| 09:00 AS 09:15 | 81 | 0 | 2 | 2 | 85 | 90 | 223 |
| 09:15 AS 09:30 | 76 | 0 | 3 | 1 | 80 | 86 | 283 |
| 09:30 AS 09:45 | 70 | 0 | 2 | 1 | 73 | 77 | 293 |
| 09:45 AS 10:00 | 63 | 0 | 3 | 1 | 67 | 73 | 325 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 138 | 0 | 2 | 2 | 142 | 147 | |
| 07:15 AS 07:30 | 134 | 0 | 1 | 2 | 137 | 141 | |
| 07:30 AS 07:45 | 109 | 0 | 1 | 0 | 110 | 112 | |
| 07:45 AS 08:00 | 104 | 0 | 0 | 1 | 105 | 106 | 505 |
| 08:00 AS 08:15 | 105 | 0 | 3 | 1 | 109 | 115 | 473 |
| 08:15 AS 08:30 | 102 | 0 | 2 | 0 | 104 | 107 | 439 |
| 08:30 AS 08:45 | 128 | 0 | 6 | 0 | 134 | 143 | 471 |
| 08:45 AS 09:00 | 127 | 0 | 2 | 0 | 129 | 132 | 497 |
| 09:00 AS 09:15 | 135 | 0 | 2 | 0 | 137 | 140 | 522 |
| 09:15 AS 09:30 | 125 | 0 | 3 | 2 | 130 | 137 | 552 |
| 09:30 AS 09:45 | 128 | 0 | 2 | 1 | 131 | 135 | 544 |
| 09:45 AS 10:00 | 117 | 0 | 5 | 0 | 122 | 130 | 541 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 07:00 AS 07:15 | 92 | 0 | 0 | 0 | 92 | 92 | |
| 07:15 AS 07:30 | 87 | 0 | 1 | 2 | 90 | 94 | |
| 07:30 AS 07:45 | 103 | 0 | 4 | 0 | 107 | 113 | |
| 07:45 AS 08:00 | 93 | 0 | 0 | 0 | 93 | 93 | 392 |
| 08:00 AS 08:15 | 94 | 0 | 0 | 0 | 94 | 94 | 394 |
| 08:15 AS 08:30 | 74 | 0 | 2 | 0 | 76 | 79 | 379 |
| 08:30 AS 08:45 | 79 | 0 | 2 | 0 | 81 | 84 | 350 |
| 08:45 AS 09:00 | 80 | 0 | 3 | 0 | 83 | 88 | 345 |
| 09:00 AS 09:15 | 85 | 0 | 1 | 2 | 88 | 92 | 342 |
| 09:15 AS 09:30 | 76 | 0 | 2 | 0 | 78 | 81 | 344 |
| 09:30 AS 09:45 | 65 | 0 | 3 | 0 | 68 | 73 | 333 |
| 09:45 AS 10:00 | 67 | 0 | 2 | 1 | 70 | 74 | 319 |

ALMOÇO

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 50 | 0 | 1 | 0 | 51 | 53 | |
| 11:15 AS 11:30 | 31 | 0 | 1 | 0 | 32 | 34 | |
| 11:30 AS 11:45 | 38 | 0 | 1 | 0 | 39 | 41 | |
| 11:45 AS 12:00 | 49 | 0 | 1 | 0 | 50 | 52 | 178 |
| 12:00 AS 12:15 | 38 | 0 | 0 | 0 | 38 | 38 | 164 |
| 12:15 AS 12:30 | 48 | 0 | 0 | 0 | 48 | 48 | 178 |
| 12:30 AS 12:45 | 41 | 0 | 1 | 0 | 42 | 44 | 181 |
| 12:45 AS 13:00 | 45 | 0 | 0 | 0 | 45 | 45 | 175 |
| 13:00 AS 13:15 | 42 | 0 | 0 | 0 | 42 | 42 | 179 |
| 13:15 AS 13:30 | 31 | 0 | 0 | 0 | 31 | 31 | 162 |
| 13:30 AS 13:45 | 40 | 0 | 1 | 0 | 41 | 43 | 161 |
| 13:45 AS 14:00 | 38 | 0 | 1 | 0 | 39 | 41 | 156 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 107 | 0 | 1 | 1 | 109 | 112 | |
| 11:15 AS 11:30 | 96 | 0 | 4 | 1 | 101 | 108 | |
| 11:30 AS 11:45 | 119 | 0 | 3 | 0 | 122 | 127 | |
| 11:45 AS 12:00 | 96 | 0 | 1 | 0 | 97 | 99 | 445 |
| 12:00 AS 12:15 | 133 | 0 | 4 | 0 | 137 | 143 | 476 |
| 12:15 AS 12:30 | 153 | 0 | 2 | 0 | 155 | 158 | 526 |
| 12:30 AS 12:45 | 113 | 0 | 0 | 1 | 114 | 115 | 515 |
| 12:45 AS 13:00 | 142 | 0 | 3 | 0 | 145 | 150 | 566 |
| 13:00 AS 13:15 | 119 | 0 | 0 | 0 | 119 | 119 | 542 |
| 13:15 AS 13:30 | 114 | 0 | 2 | 0 | 116 | 119 | 503 |
| 13:30 AS 13:45 | 119 | 0 | 6 | 0 | 125 | 134 | 522 |
| 13:45 AS 14:00 | 129 | 0 | 2 | 1 | 132 | 136 | 508 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 41 | 0 | 1 | 0 | 42 | 44 | |
| 11:15 AS 11:30 | 37 | 0 | 0 | 0 | 37 | 37 | |
| 11:30 AS 11:45 | 41 | 0 | 0 | 0 | 41 | 41 | |
| 11:45 AS 12:00 | 37 | 0 | 2 | 0 | 39 | 42 | 164 |
| 12:00 AS 12:15 | 46 | 0 | 2 | 0 | 48 | 51 | 171 |
| 12:15 AS 12:30 | 39 | 0 | 1 | 0 | 40 | 42 | 176 |
| 12:30 AS 12:45 | 39 | 0 | 1 | 0 | 40 | 42 | 176 |
| 12:45 AS 13:00 | 35 | 0 | 0 | 0 | 35 | 35 | 169 |
| 13:00 AS 13:15 | 36 | 0 | 2 | 0 | 38 | 41 | 159 |
| 13:15 AS 13:30 | 46 | 0 | 0 | 0 | 46 | 46 | 164 |
| 13:30 AS 13:45 | 36 | 0 | 0 | 0 | 36 | 36 | 158 |
| 13:45 AS 14:00 | 47 | 0 | 1 | 0 | 48 | 50 | 173 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 268 | 0 | 12 | 4 | 284 | 306 | |
| 11:15 AS 11:30 | 248 | 0 | 11 | 5 | 264 | 286 | |
| 11:30 AS 11:45 | 308 | 0 | 8 | 7 | 323 | 342 | |
| 11:45 AS 12:00 | 275 | 0 | 12 | 9 | 296 | 323 | 1.257 |
| 12:00 AS 12:15 | 354 | 0 | 6 | 6 | 366 | 381 | 1.332 |
| 12:15 AS 12:30 | 352 | 0 | 8 | 5 | 365 | 382 | 1.428 |
| 12:30 AS 12:45 | 318 | 0 | 3 | 7 | 328 | 340 | 1.426 |
| 12:45 AS 13:00 | 342 | 0 | 9 | 7 | 358 | 379 | 1.481 |
| 13:00 AS 13:15 | 398 | 0 | 6 | 3 | 407 | 419 | 1.519 |
| 13:15 AS 13:30 | 321 | 0 | 10 | 8 | 339 | 362 | 1.499 |
| 13:30 AS 13:45 | 369 | 0 | 8 | 8 | 385 | 405 | 1.565 |
| 13:45 AS 14:00 | 372 | 0 | 12 | 5 | 389 | 412 | 1.598 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 300 | 0 | 12 | 4 | 316 | 338 | |
| 11:15 AS 11:30 | 285 | 0 | 9 | 6 | 300 | 320 | |
| 11:30 AS 11:45 | 327 | 0 | 7 | 6 | 340 | 357 | |
| 11:45 AS 12:00 | 363 | 0 | 4 | 6 | 373 | 385 | 1.399 |
| 12:00 AS 12:15 | 385 | 0 | 8 | 4 | 397 | 413 | 1.474 |
| 12:15 AS 12:30 | 377 | 0 | 4 | 8 | 389 | 403 | 1.558 |
| 12:30 AS 12:45 | 380 | 0 | 8 | 7 | 395 | 414 | 1.615 |
| 12:45 AS 13:00 | 353 | 0 | 5 | 7 | 365 | 380 | 1.610 |
| 13:00 AS 13:15 | 358 | 0 | 7 | 4 | 369 | 384 | 1.580 |
| 13:15 AS 13:30 | 312 | 0 | 10 | 5 | 327 | 347 | 1.524 |
| 13:30 AS 13:45 | 305 | 0 | 8 | 6 | 319 | 337 | 1.447 |
| 13:45 AS 14:00 | 338 | 0 | 5 | 5 | 348 | 361 | 1.428 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 98 | 0 | 2 | 0 | 100 | 103 | |
| 11:15 AS 11:30 | 103 | 0 | 1 | 0 | 104 | 106 | |
| 11:30 AS 11:45 | 107 | 0 | 5 | 0 | 112 | 120 | |
| 11:45 AS 12:00 | 128 | 0 | 3 | 0 | 131 | 136 | 464 |
| 12:00 AS 12:15 | 123 | 0 | 1 | 0 | 124 | 126 | 486 |
| 12:15 AS 12:30 | 128 | 0 | 2 | 0 | 130 | 133 | 514 |
| 12:30 AS 12:45 | 95 | 0 | 3 | 0 | 98 | 103 | 497 |
| 12:45 AS 13:00 | 114 | 0 | 0 | 0 | 114 | 114 | 475 |
| 13:00 AS 13:15 | 104 | 0 | 1 | 0 | 105 | 107 | 456 |
| 13:15 AS 13:30 | 100 | 0 | 3 | 0 | 103 | 108 | 431 |
| 13:30 AS 13:45 | 94 | 0 | 0 | 0 | 94 | 94 | 422 |
| 13:45 AS 14:00 | 117 | 0 | 0 | 0 | 117 | 117 | 425 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 50 | 0 | 0 | 0 | 50 | 50 | |
| 11:15 AS 11:30 | 47 | 0 | 1 | 0 | 48 | 50 | |
| 11:30 AS 11:45 | 37 | 0 | 2 | 0 | 39 | 42 | |
| 11:45 AS 12:00 | 52 | 0 | 0 | 0 | 52 | 52 | 194 |
| 12:00 AS 12:15 | 58 | 0 | 1 | 0 | 59 | 61 | 204 |
| 12:15 AS 12:30 | 60 | 0 | 0 | 0 | 60 | 60 | 215 |
| 12:30 AS 12:45 | 61 | 0 | 0 | 0 | 61 | 61 | 234 |
| 12:45 AS 13:00 | 63 | 0 | 1 | 0 | 64 | 66 | 247 |
| 13:00 AS 13:15 | 65 | 0 | 0 | 0 | 65 | 65 | 252 |
| 13:15 AS 13:30 | 64 | 0 | 1 | 0 | 65 | 67 | 258 |
| 13:30 AS 13:45 | 65 | 0 | 1 | 0 | 66 | 68 | 265 |
| 13:45 AS 14:00 | 62 | 0 | 0 | 0 | 62 | 62 | 261 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 224 | 0 | 11 | 4 | 239 | 260 | |
| 11:15 AS 11:30 | 217 | 0 | 11 | 5 | 233 | 255 | |
| 11:30 AS 11:45 | 261 | 0 | 6 | 6 | 273 | 288 | |
| 11:45 AS 12:00 | 220 | 0 | 9 | 9 | 238 | 261 | 1.063 |
| 12:00 AS 12:15 | 297 | 0 | 5 | 5 | 307 | 320 | 1.123 |
| 12:15 AS 12:30 | 303 | 0 | 8 | 5 | 316 | 333 | 1.201 |
| 12:30 AS 12:45 | 255 | 0 | 1 | 6 | 262 | 270 | 1.183 |
| 12:45 AS 13:00 | 286 | 0 | 8 | 7 | 301 | 320 | 1.242 |
| 13:00 AS 13:15 | 331 | 0 | 5 | 2 | 338 | 348 | 1.270 |
| 13:15 AS 13:30 | 251 | 0 | 10 | 8 | 269 | 292 | 1.229 |
| 13:30 AS 13:45 | 301 | 0 | 7 | 7 | 315 | 333 | 1.292 |
| 13:45 AS 14:00 | 311 | 0 | 11 | 5 | 327 | 349 | 1.321 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 77 | 0 | 2 | 1 | 80 | 84 | |
| 11:15 AS 11:30 | 75 | 0 | 2 | 0 | 77 | 80 | |
| 11:30 AS 11:45 | 89 | 0 | 1 | 2 | 92 | 96 | |
| 11:45 AS 12:00 | 100 | 0 | 2 | 0 | 102 | 105 | 365 |
| 12:00 AS 12:15 | 99 | 0 | 1 | 0 | 100 | 102 | 382 |
| 12:15 AS 12:30 | 101 | 0 | 2 | 1 | 104 | 108 | 410 |
| 12:30 AS 12:45 | 102 | 0 | 3 | 0 | 105 | 110 | 424 |
| 12:45 AS 13:00 | 112 | 0 | 2 | 0 | 114 | 117 | 436 |
| 13:00 AS 13:15 | 109 | 0 | 1 | 1 | 111 | 114 | 448 |
| 13:15 AS 13:30 | 111 | 0 | 0 | 0 | 111 | 111 | 451 |
| 13:30 AS 13:45 | 109 | 0 | 2 | 0 | 111 | 114 | 456 |
| 13:45 AS 14:00 | 107 | 0 | 1 | 1 | 109 | 112 | 450 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 15 | 0 | 1 | 0 | 16 | 18 | |
| 11:15 AS 11:30 | 19 | 0 | 2 | 1 | 22 | 26 | |
| 11:30 AS 11:45 | 20 | 0 | 0 | 0 | 20 | 20 | |
| 11:45 AS 12:00 | 17 | 0 | 2 | 1 | 20 | 24 | 88 |
| 12:00 AS 12:15 | 19 | 0 | 0 | 0 | 19 | 19 | 89 |
| 12:15 AS 12:30 | 23 | 0 | 2 | 0 | 25 | 28 | 91 |
| 12:30 AS 12:45 | 25 | 0 | 3 | 1 | 29 | 35 | 106 |
| 12:45 AS 13:00 | 23 | 0 | 0 | 0 | 23 | 23 | 105 |
| 13:00 AS 13:15 | 20 | 0 | 1 | 1 | 22 | 25 | 110 |
| 13:15 AS 13:30 | 20 | 0 | 0 | 1 | 21 | 22 | 104 |
| 13:30 AS 13:45 | 19 | 0 | 4 | 0 | 23 | 29 | 99 |
| 13:45 AS 14:00 | 23 | 0 | 1 | 0 | 24 | 26 | 101 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 44 | 0 | 1 | 0 | 45 | 47 | |
| 11:15 AS 11:30 | 31 | 0 | 0 | 0 | 31 | 31 | |
| 11:30 AS 11:45 | 47 | 0 | 2 | 1 | 50 | 54 | |
| 11:45 AS 12:00 | 55 | 0 | 3 | 0 | 58 | 63 | 194 |
| 12:00 AS 12:15 | 57 | 0 | 1 | 1 | 59 | 62 | 209 |
| 12:15 AS 12:30 | 49 | 0 | 0 | 0 | 49 | 49 | 227 |
| 12:30 AS 12:45 | 63 | 0 | 2 | 1 | 66 | 70 | 243 |
| 12:45 AS 13:00 | 56 | 0 | 1 | 0 | 57 | 59 | 239 |
| 13:00 AS 13:15 | 67 | 0 | 1 | 1 | 69 | 72 | 249 |
| 13:15 AS 13:30 | 70 | 0 | 0 | 0 | 70 | 70 | 270 |
| 13:30 AS 13:45 | 68 | 0 | 1 | 1 | 70 | 73 | 273 |
| 13:45 AS 14:00 | 61 | 0 | 1 | 0 | 62 | 64 | 278 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 350 | 0 | 13 | 4 | 367 | 391 | |
| 11:15 AS 11:30 | 316 | 0 | 10 | 6 | 332 | 353 | |
| 11:30 AS 11:45 | 365 | 0 | 8 | 6 | 379 | 397 | |
| 11:45 AS 12:00 | 412 | 0 | 5 | 6 | 423 | 437 | 1.577 |
| 12:00 AS 12:15 | 423 | 0 | 8 | 4 | 435 | 451 | 1.638 |
| 12:15 AS 12:30 | 425 | 0 | 4 | 8 | 437 | 451 | 1.736 |
| 12:30 AS 12:45 | 421 | 0 | 9 | 7 | 437 | 458 | 1.796 |
| 12:45 AS 13:00 | 398 | 0 | 5 | 7 | 410 | 425 | 1.784 |
| 13:00 AS 13:15 | 400 | 0 | 7 | 4 | 411 | 426 | 1.759 |
| 13:15 AS 13:30 | 343 | 0 | 10 | 5 | 358 | 378 | 1.686 |
| 13:30 AS 13:45 | 345 | 0 | 9 | 6 | 360 | 380 | 1.608 |
| 13:45 AS 14:00 | 376 | 0 | 6 | 5 | 387 | 401 | 1.584 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 65 | 0 | 2 | 1 | 68 | 72 | |
| 11:15 AS 11:30 | 51 | 0 | 4 | 0 | 55 | 61 | |
| 11:30 AS 11:45 | 78 | 0 | 2 | 3 | 83 | 89 | |
| 11:45 AS 12:00 | 73 | 0 | 5 | 0 | 78 | 86 | 308 |
| 12:00 AS 12:15 | 76 | 0 | 0 | 0 | 76 | 76 | 312 |
| 12:15 AS 12:30 | 82 | 0 | 4 | 1 | 87 | 94 | 345 |
| 12:30 AS 12:45 | 106 | 0 | 2 | 1 | 109 | 113 | 369 |
| 12:45 AS 13:00 | 103 | 0 | 2 | 0 | 105 | 108 | 391 |
| 13:00 AS 13:15 | 103 | 0 | 1 | 2 | 106 | 110 | 425 |
| 13:15 AS 13:30 | 113 | 0 | 0 | 0 | 113 | 113 | 444 |
| 13:30 AS 13:45 | 115 | 0 | 5 | 0 | 120 | 128 | 458 |
| 13:45 AS 14:00 | 113 | 0 | 2 | 1 | 116 | 120 | 470 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 13 | 0 | 0 | 0 | 13 | 13 | |
| 11:15 AS 11:30 | 11 | 0 | 0 | 0 | 11 | 11 | |
| 11:30 AS 11:45 | 9 | 0 | 0 | 0 | 9 | 9 | |
| 11:45 AS 12:00 | 11 | 0 | 0 | 0 | 11 | 11 | 44 |
| 12:00 AS 12:15 | 12 | 0 | 1 | 0 | 13 | 15 | 46 |
| 12:15 AS 12:30 | 17 | 0 | 0 | 0 | 17 | 17 | 52 |
| 12:30 AS 12:45 | 13 | 0 | 1 | 0 | 14 | 16 | 58 |
| 12:45 AS 13:00 | 19 | 0 | 0 | 0 | 19 | 19 | 66 |
| 13:00 AS 13:15 | 16 | 0 | 0 | 0 | 16 | 16 | 68 |
| 13:15 AS 13:30 | 13 | 0 | 1 | 0 | 14 | 16 | 66 |
| 13:30 AS 13:45 | 11 | 0 | 0 | 0 | 11 | 11 | 62 |
| 13:45 AS 14:00 | 12 | 0 | 1 | 0 | 13 | 15 | 57 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 71 | 0 | 1 | 0 | 72 | 74 | |
| 11:15 AS 11:30 | 74 | 0 | 0 | 1 | 75 | 76 | |
| 11:30 AS 11:45 | 78 | 0 | 1 | 0 | 79 | 81 | |
| 11:45 AS 12:00 | 85 | 0 | 1 | 1 | 87 | 90 | 320 |
| 12:00 AS 12:15 | 99 | 0 | 2 | 1 | 102 | 106 | 352 |
| 12:15 AS 12:30 | 91 | 0 | 0 | 0 | 91 | 91 | 367 |
| 12:30 AS 12:45 | 84 | 0 | 6 | 0 | 90 | 99 | 386 |
| 12:45 AS 13:00 | 88 | 0 | 1 | 0 | 89 | 91 | 387 |
| 13:00 AS 13:15 | 93 | 0 | 2 | 1 | 96 | 100 | 381 |
| 13:15 AS 13:30 | 85 | 0 | 0 | 1 | 86 | 87 | 377 |
| 13:30 AS 13:45 | 81 | 0 | 2 | 0 | 83 | 86 | 364 |
| 13:45 AS 14:00 | 78 | 0 | 1 | 0 | 79 | 81 | 354 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 11:00 AS 11:15 | 35 | 0 | 0 | 0 | 35 | 35 | |
| 11:15 AS 11:30 | 41 | 0 | 1 | 0 | 42 | 44 | |
| 11:30 AS 11:45 | 50 | 0 | 2 | 0 | 52 | 55 | |
| 11:45 AS 12:00 | 61 | 0 | 0 | 0 | 61 | 61 | 195 |
| 12:00 AS 12:15 | 72 | 0 | 0 | 0 | 72 | 72 | 232 |
| 12:15 AS 12:30 | 55 | 0 | 2 | 0 | 57 | 60 | 248 |
| 12:30 AS 12:45 | 53 | 0 | 0 | 0 | 53 | 53 | 246 |
| 12:45 AS 13:00 | 52 | 0 | 2 | 0 | 54 | 57 | 242 |
| 13:00 AS 13:15 | 50 | 0 | 1 | 0 | 51 | 53 | 223 |
| 13:15 AS 13:30 | 54 | 0 | 0 | 0 | 54 | 54 | 217 |
| 13:30 AS 13:45 | 43 | 0 | 1 | 0 | 44 | 46 | 209 |
| 13:45 AS 14:00 | 44 | 0 | 1 | 0 | 45 | 47 | 199 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 11:00 AS 11:15 | 83 | 0 | 0 | 0 | 83 | 83 | |
| 11:15 AS 11:30 | 81 | 0 | 3 | 0 | 84 | 89 | |
| 11:30 AS 11:45 | 81 | 0 | 1 | 0 | 82 | 84 | |
| 11:45 AS 12:00 | 71 | 0 | 4 | 0 | 75 | 81 | 336 |
| 12:00 AS 12:15 | 44 | 0 | 3 | 1 | 48 | 54 | 307 |
| 12:15 AS 12:30 | 63 | 0 | 5 | 0 | 68 | 76 | 294 |
| 12:30 AS 12:45 | 72 | 0 | 1 | 1 | 74 | 77 | 287 |
| 12:45 AS 13:00 | 69 | 0 | 1 | 1 | 71 | 74 | 279 |
| 13:00 AS 13:15 | 70 | 0 | 1 | 0 | 71 | 73 | 298 |
| 13:15 AS 13:30 | 51 | 0 | 5 | 0 | 56 | 64 | 286 |
| 13:30 AS 13:45 | 58 | 0 | 1 | 1 | 60 | 63 | 272 |
| 13:45 AS 14:00 | 81 | 0 | 2 | 0 | 83 | 86 | 285 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 11:00 AS 11:15 | 140 | 0 | 1 | 0 | 141 | 143 | |
| 11:15 AS 11:30 | 143 | 0 | 3 | 0 | 146 | 151 | |
| 11:30 AS 11:45 | 146 | 0 | 4 | 0 | 150 | 156 | |
| 11:45 AS 12:00 | 150 | 0 | 3 | 0 | 153 | 158 | 607 |
| 12:00 AS 12:15 | 144 | 0 | 4 | 0 | 148 | 154 | 618 |
| 12:15 AS 12:30 | 137 | 0 | 5 | 0 | 142 | 150 | 617 |
| 12:30 AS 12:45 | 139 | 0 | 2 | 1 | 142 | 146 | 607 |
| 12:45 AS 13:00 | 132 | 0 | 3 | 0 | 135 | 140 | 589 |
| 13:00 AS 13:15 | 135 | 0 | 4 | 0 | 139 | 145 | 580 |
| 13:15 AS 13:30 | 131 | 0 | 2 | 0 | 133 | 136 | 567 |
| 13:30 AS 13:45 | 127 | 0 | 1 | 1 | 129 | 132 | 552 |
| 13:45 AS 14:00 | 123 | 0 | 2 | 0 | 125 | 128 | 541 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 11:00 AS 11:15 | 49 | 0 | 0 | 0 | 49 | 49 | |
| 11:15 AS 11:30 | 53 | 0 | 1 | 0 | 54 | 56 | |
| 11:30 AS 11:45 | 63 | 0 | 0 | 0 | 63 | 63 | |
| 11:45 AS 12:00 | 67 | 0 | 2 | 0 | 69 | 72 | 240 |
| 12:00 AS 12:15 | 71 | 0 | 1 | 2 | 74 | 78 | 268 |
| 12:15 AS 12:30 | 72 | 0 | 2 | 0 | 74 | 77 | 290 |
| 12:30 AS 12:45 | 70 | 0 | 2 | 0 | 72 | 75 | 302 |
| 12:45 AS 13:00 | 77 | 0 | 1 | 1 | 79 | 82 | 311 |
| 13:00 AS 13:15 | 78 | 0 | 0 | 0 | 78 | 78 | 312 |
| 13:15 AS 13:30 | 59 | 0 | 3 | 0 | 62 | 67 | 301 |
| 13:30 AS 13:45 | 55 | 0 | 1 | 0 | 56 | 58 | 284 |
| 13:45 AS 14:00 | 80 | 0 | 2 | 0 | 82 | 85 | 287 |

TARDE

MOV. 1 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 34 | 0 | 0 | 0 | 34 | 34 | |
| 17:15 AS 17:30 | 54 | 0 | 0 | 0 | 54 | 54 | |
| 17:30 AS 17:45 | 34 | 0 | 0 | 0 | 34 | 34 | |
| 17:45 AS 18:00 | 36 | 0 | 0 | 0 | 36 | 36 | 158 |
| 18:00 AS 18:15 | 43 | 0 | 0 | 0 | 43 | 43 | 167 |
| 18:15 AS 18:30 | 34 | 0 | 0 | 0 | 34 | 34 | 147 |
| 18:30 AS 18:45 | 36 | 0 | 0 | 0 | 36 | 36 | 149 |
| 18:45 AS 19:00 | 39 | 0 | 0 | 0 | 39 | 39 | 152 |
| 19:00 AS 19:15 | 33 | 0 | 0 | 0 | 33 | 33 | 142 |
| 19:15 AS 19:30 | 30 | 0 | 0 | 0 | 30 | 30 | 138 |
| 19:30 AS 19:45 | 30 | 0 | 0 | 0 | 30 | 30 | 132 |
| 19:45 AS 20:00 | 17 | 0 | 0 | 0 | 17 | 17 | 110 |

MOV. 1 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 210 | 0 | 1 | 0 | 211 | 213 | |
| 17:15 AS 17:30 | 145 | 0 | 0 | 1 | 146 | 147 | |
| 17:30 AS 17:45 | 185 | 0 | 1 | 2 | 188 | 192 | |
| 17:45 AS 18:00 | 189 | 0 | 0 | 1 | 190 | 191 | 742 |
| 18:00 AS 18:15 | 146 | 0 | 0 | 0 | 146 | 146 | 676 |
| 18:15 AS 18:30 | 190 | 0 | 1 | 3 | 194 | 199 | 727 |
| 18:30 AS 18:45 | 190 | 0 | 2 | 0 | 192 | 195 | 731 |
| 18:45 AS 19:00 | 155 | 0 | 0 | 3 | 158 | 161 | 701 |
| 19:00 AS 19:15 | 166 | 0 | 0 | 2 | 168 | 170 | 725 |
| 19:15 AS 19:30 | 144 | 0 | 0 | 1 | 145 | 146 | 672 |
| 19:30 AS 19:45 | 101 | 0 | 0 | 1 | 102 | 103 | 580 |
| 19:45 AS 20:00 | 93 | 0 | 0 | 0 | 93 | 93 | 512 |

MOV. 1 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 31 | 0 | 0 | 0 | 31 | 31 | |
| 17:15 AS 17:30 | 23 | 0 | 0 | 0 | 23 | 23 | |
| 17:30 AS 17:45 | 21 | 0 | 1 | 0 | 22 | 24 | |
| 17:45 AS 18:00 | 23 | 0 | 0 | 0 | 23 | 23 | 101 |
| 18:00 AS 18:15 | 11 | 0 | 1 | 0 | 12 | 14 | 83 |
| 18:15 AS 18:30 | 15 | 0 | 0 | 0 | 15 | 15 | 75 |
| 18:30 AS 18:45 | 22 | 0 | 0 | 0 | 22 | 22 | 74 |
| 18:45 AS 19:00 | 20 | 0 | 0 | 0 | 20 | 20 | 71 |
| 19:00 AS 19:15 | 12 | 0 | 0 | 0 | 12 | 12 | 69 |
| 19:15 AS 19:30 | 29 | 0 | 1 | 0 | 30 | 32 | 86 |
| 19:30 AS 19:45 | 26 | 0 | 1 | 1 | 28 | 31 | 94 |
| 19:45 AS 20:00 | 16 | 0 | 1 | 1 | 18 | 21 | 95 |

MOV. 2 > 4

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 329 | 0 | 2 | 13 | 344 | 360 | |
| 17:15 AS 17:30 | 354 | 0 | 7 | 14 | 375 | 400 | |
| 17:30 AS 17:45 | 334 | 0 | 1 | 15 | 350 | 367 | |
| 17:45 AS 18:00 | 307 | 0 | 2 | 8 | 317 | 328 | 1.454 |
| 18:00 AS 18:15 | 386 | 0 | 7 | 11 | 404 | 426 | 1.520 |
| 18:15 AS 18:30 | 321 | 0 | 2 | 9 | 332 | 344 | 1.464 |
| 18:30 AS 18:45 | 306 | 0 | 1 | 8 | 315 | 325 | 1.422 |
| 18:45 AS 19:00 | 335 | 0 | 4 | 10 | 349 | 365 | 1.459 |
| 19:00 AS 19:15 | 350 | 0 | 5 | 11 | 366 | 385 | 1.418 |
| 19:15 AS 19:30 | 294 | 0 | 1 | 4 | 299 | 305 | 1.379 |
| 19:30 AS 19:45 | 310 | 0 | 5 | 11 | 326 | 345 | 1.399 |
| 19:45 AS 20:00 | 258 | 0 | 4 | 3 | 265 | 274 | 1.308 |

MOV. 4 > 2

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 367 | 0 | 3 | 6 | 376 | 387 | |
| 17:15 AS 17:30 | 446 | 0 | 3 | 5 | 454 | 464 | |
| 17:30 AS 17:45 | 412 | 0 | 5 | 12 | 429 | 449 | |
| 17:45 AS 18:00 | 381 | 0 | 3 | 9 | 393 | 407 | 1.705 |
| 18:00 AS 18:15 | 435 | 0 | 2 | 11 | 448 | 462 | 1.781 |
| 18:15 AS 18:30 | 420 | 0 | 4 | 10 | 434 | 450 | 1.767 |
| 18:30 AS 18:45 | 380 | 0 | 3 | 7 | 390 | 402 | 1.720 |
| 18:45 AS 19:00 | 373 | 0 | 5 | 9 | 387 | 404 | 1.717 |
| 19:00 AS 19:15 | 342 | 0 | 3 | 14 | 359 | 378 | 1.633 |
| 19:15 AS 19:30 | 384 | 0 | 1 | 10 | 395 | 407 | 1.589 |
| 19:30 AS 19:45 | 342 | 0 | 0 | 6 | 348 | 354 | 1.542 |
| 19:45 AS 20:00 | 272 | 0 | 3 | 8 | 283 | 296 | 1.434 |

MOV. 4 > 3

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 121 | 0 | 2 | 0 | 123 | 126 | |
| 17:15 AS 17:30 | 124 | 0 | 0 | 1 | 125 | 126 | |
| 17:30 AS 17:45 | 123 | 0 | 2 | 0 | 125 | 128 | |
| 17:45 AS 18:00 | 112 | 0 | 0 | 0 | 112 | 112 | 492 |
| 18:00 AS 18:15 | 119 | 0 | 1 | 2 | 122 | 126 | 492 |
| 18:15 AS 18:30 | 112 | 0 | 1 | 1 | 114 | 117 | 482 |
| 18:30 AS 18:45 | 103 | 0 | 1 | 1 | 105 | 108 | 462 |
| 18:45 AS 19:00 | 129 | 0 | 0 | 2 | 131 | 133 | 483 |
| 19:00 AS 19:15 | 130 | 0 | 0 | 2 | 132 | 134 | 491 |
| 19:15 AS 19:30 | 151 | 0 | 1 | 1 | 153 | 156 | 530 |
| 19:30 AS 19:45 | 103 | 0 | 1 | 2 | 106 | 110 | 532 |
| 19:45 AS 20:00 | 91 | 0 | 0 | 1 | 92 | 93 | 492 |

MOV. 12 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 71 | 0 | 0 | 0 | 71 | 71 | |
| 17:15 AS 17:30 | 56 | 0 | 0 | 0 | 56 | 56 | |
| 17:30 AS 17:45 | 44 | 0 | 0 | 1 | 45 | 46 | |
| 17:45 AS 18:00 | 49 | 0 | 1 | 0 | 50 | 52 | 225 |
| 18:00 AS 18:15 | 58 | 0 | 0 | 0 | 58 | 58 | 212 |
| 18:15 AS 18:30 | 56 | 0 | 0 | 0 | 56 | 56 | 212 |
| 18:30 AS 18:45 | 59 | 0 | 1 | 0 | 60 | 62 | 227 |
| 18:45 AS 19:00 | 57 | 0 | 0 | 0 | 57 | 57 | 233 |
| 19:00 AS 19:15 | 55 | 0 | 0 | 0 | 55 | 55 | 230 |
| 19:15 AS 19:30 | 51 | 0 | 1 | 0 | 52 | 54 | 227 |
| 19:30 AS 19:45 | 45 | 0 | 0 | 0 | 45 | 45 | 211 |
| 19:45 AS 20:00 | 48 | 0 | 0 | 0 | 48 | 48 | 202 |

MOV. 12 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 284 | 0 | 1 | 12 | 297 | 311 | |
| 17:15 AS 17:30 | 319 | 0 | 5 | 14 | 338 | 360 | |
| 17:30 AS 17:45 | 286 | 0 | 1 | 15 | 302 | 319 | |
| 17:45 AS 18:00 | 275 | 0 | 1 | 8 | 284 | 294 | 1.282 |
| 18:00 AS 18:15 | 351 | 0 | 7 | 10 | 368 | 389 | 1.360 |
| 18:15 AS 18:30 | 293 | 0 | 1 | 9 | 303 | 314 | 1.314 |
| 18:30 AS 18:45 | 273 | 0 | 0 | 8 | 281 | 289 | 1.285 |
| 18:45 AS 19:00 | 296 | 0 | 4 | 10 | 310 | 326 | 1.317 |
| 19:00 AS 19:15 | 295 | 0 | 4 | 9 | 308 | 323 | 1.252 |
| 19:15 AS 19:30 | 251 | 0 | 0 | 4 | 255 | 259 | 1.197 |
| 19:30 AS 19:45 | 255 | 0 | 4 | 10 | 269 | 285 | 1.193 |
| 19:45 AS 20:00 | 214 | 0 | 4 | 1 | 219 | 226 | 1.093 |

MOV. 13 > 11

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 122 | 0 | 1 | 2 | 125 | 129 | |
| 17:15 AS 17:30 | 100 | 0 | 2 | 0 | 102 | 105 | |
| 17:30 AS 17:45 | 107 | 0 | 1 | 1 | 109 | 112 | |
| 17:45 AS 18:00 | 102 | 0 | 1 | 2 | 105 | 109 | 454 |
| 18:00 AS 18:15 | 118 | 0 | 2 | 1 | 121 | 125 | 450 |
| 18:15 AS 18:30 | 99 | 0 | 0 | 0 | 99 | 99 | 444 |
| 18:30 AS 18:45 | 101 | 0 | 1 | 2 | 104 | 108 | 440 |
| 18:45 AS 19:00 | 97 | 0 | 2 | 2 | 101 | 106 | 438 |
| 19:00 AS 19:15 | 69 | 0 | 1 | 1 | 71 | 74 | 386 |
| 19:15 AS 19:30 | 70 | 0 | 1 | 2 | 73 | 77 | 364 |
| 19:30 AS 19:45 | 72 | 0 | 2 | 0 | 74 | 77 | 333 |
| 19:45 AS 20:00 | 55 | 0 | 1 | 1 | 57 | 60 | 287 |

MOV. 13 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 20 | 0 | 0 | 0 | 20 | 20 | |
| 17:15 AS 17:30 | 20 | 0 | 0 | 1 | 21 | 22 | |
| 17:30 AS 17:45 | 27 | 0 | 0 | 0 | 27 | 27 | |
| 17:45 AS 18:00 | 21 | 0 | 0 | 0 | 21 | 21 | 90 |
| 18:00 AS 18:15 | 23 | 0 | 1 | 2 | 26 | 30 | 100 |
| 18:15 AS 18:30 | 28 | 0 | 2 | 0 | 30 | 33 | 111 |
| 18:30 AS 18:45 | 21 | 0 | 0 | 1 | 22 | 23 | 107 |
| 18:45 AS 19:00 | 24 | 0 | 2 | 0 | 26 | 29 | 115 |
| 19:00 AS 19:15 | 25 | 0 | 1 | 0 | 26 | 28 | 113 |
| 19:15 AS 19:30 | 24 | 0 | 2 | 0 | 26 | 29 | 109 |
| 19:30 AS 19:45 | 22 | 0 | 2 | 0 | 24 | 27 | 113 |
| 19:45 AS 20:00 | 23 | 0 | 2 | 3 | 28 | 34 | 118 |

MOV. 13 > 14

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 45 | 0 | 1 | 1 | 47 | 50 | |
| 17:15 AS 17:30 | 35 | 0 | 2 | 0 | 37 | 40 | |
| 17:30 AS 17:45 | 48 | 0 | 0 | 0 | 48 | 48 | |
| 17:45 AS 18:00 | 32 | 0 | 1 | 0 | 33 | 35 | 172 |
| 18:00 AS 18:15 | 35 | 0 | 0 | 1 | 36 | 37 | 160 |
| 18:15 AS 18:30 | 28 | 0 | 1 | 0 | 29 | 31 | 150 |
| 18:30 AS 18:45 | 33 | 0 | 2 | 0 | 35 | 38 | 140 |
| 18:45 AS 19:00 | 39 | 0 | 0 | 0 | 39 | 39 | 145 |
| 19:00 AS 19:15 | 55 | 0 | 1 | 2 | 58 | 62 | 169 |
| 19:15 AS 19:30 | 43 | 0 | 1 | 0 | 44 | 46 | 184 |
| 19:30 AS 19:45 | 55 | 0 | 1 | 1 | 57 | 60 | 206 |
| 19:45 AS 20:00 | 44 | 0 | 0 | 2 | 46 | 48 | 215 |

MOV. 14 > 12

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 401 | 0 | 3 | 6 | 410 | 421 | |
| 17:15 AS 17:30 | 500 | 0 | 3 | 5 | 508 | 518 | |
| 17:30 AS 17:45 | 446 | 0 | 5 | 12 | 463 | 483 | |
| 17:45 AS 18:00 | 417 | 0 | 3 | 9 | 429 | 443 | 1.863 |
| 18:00 AS 18:15 | 478 | 0 | 2 | 11 | 491 | 505 | 1.948 |
| 18:15 AS 18:30 | 454 | 0 | 4 | 10 | 468 | 484 | 1.914 |
| 18:30 AS 18:45 | 416 | 0 | 3 | 7 | 426 | 438 | 1.869 |
| 18:45 AS 19:00 | 412 | 0 | 5 | 9 | 426 | 443 | 1.869 |
| 19:00 AS 19:15 | 375 | 0 | 3 | 14 | 392 | 411 | 1.775 |
| 19:15 AS 19:30 | 414 | 0 | 1 | 10 | 425 | 437 | 1.727 |
| 19:30 AS 19:45 | 372 | 0 | 0 | 6 | 378 | 384 | 1.674 |
| 19:45 AS 20:00 | 289 | 0 | 3 | 8 | 300 | 313 | 1.544 |

MOV. 23 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 69 | 0 | 1 | 2 | 72 | 76 | |
| 17:15 AS 17:30 | 43 | 0 | 4 | 0 | 47 | 53 | |
| 17:30 AS 17:45 | 90 | 0 | 0 | 1 | 91 | 92 | |
| 17:45 AS 18:00 | 63 | 0 | 2 | 2 | 67 | 72 | 293 |
| 18:00 AS 18:15 | 86 | 0 | 2 | 3 | 91 | 97 | 314 |
| 18:15 AS 18:30 | 66 | 0 | 3 | 0 | 69 | 74 | 335 |
| 18:30 AS 18:45 | 65 | 0 | 3 | 2 | 70 | 77 | 319 |
| 18:45 AS 19:00 | 73 | 0 | 3 | 2 | 78 | 85 | 332 |
| 19:00 AS 19:15 | 65 | 0 | 3 | 2 | 70 | 77 | 311 |
| 19:15 AS 19:30 | 59 | 0 | 3 | 2 | 64 | 71 | 308 |
| 19:30 AS 19:45 | 89 | 0 | 5 | 0 | 94 | 102 | 333 |
| 19:45 AS 20:00 | 64 | 0 | 1 | 5 | 70 | 77 | 325 |

MOV. 23 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 15 | 0 | 1 | 0 | 16 | 18 | |
| 17:15 AS 17:30 | 21 | 0 | 0 | 0 | 21 | 21 | |
| 17:30 AS 17:45 | 19 | 0 | 0 | 0 | 19 | 19 | |
| 17:45 AS 18:00 | 17 | 0 | 0 | 0 | 17 | 17 | 75 |
| 18:00 AS 18:15 | 15 | 0 | 1 | 0 | 16 | 18 | 75 |
| 18:15 AS 18:30 | 10 | 0 | 0 | 0 | 10 | 10 | 64 |
| 18:30 AS 18:45 | 11 | 0 | 1 | 0 | 12 | 14 | 58 |
| 18:45 AS 19:00 | 16 | 0 | 0 | 0 | 16 | 16 | 57 |
| 19:00 AS 19:15 | 13 | 0 | 0 | 1 | 14 | 15 | 55 |
| 19:15 AS 19:30 | 21 | 0 | 2 | 0 | 23 | 26 | 71 |
| 19:30 AS 19:45 | 14 | 0 | 0 | 1 | 15 | 16 | 73 |
| 19:45 AS 20:00 | 12 | 0 | 1 | 1 | 14 | 17 | 74 |

MOV. 24 > 21

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 118 | 0 | 1 | 0 | 119 | 121 | |
| 17:15 AS 17:30 | 112 | 0 | 0 | 1 | 113 | 114 | |
| 17:30 AS 17:45 | 92 | 0 | 1 | 0 | 93 | 95 | |
| 17:45 AS 18:00 | 92 | 0 | 0 | 0 | 92 | 92 | 421 |
| 18:00 AS 18:15 | 90 | 0 | 1 | 1 | 92 | 95 | 395 |
| 18:15 AS 18:30 | 89 | 0 | 0 | 0 | 89 | 89 | 370 |
| 18:30 AS 18:45 | 90 | 0 | 0 | 1 | 91 | 92 | 368 |
| 18:45 AS 19:00 | 87 | 0 | 1 | 0 | 88 | 90 | 365 |
| 19:00 AS 19:15 | 84 | 0 | 0 | 1 | 85 | 86 | 357 |
| 19:15 AS 19:30 | 78 | 0 | 1 | 0 | 79 | 81 | 348 |
| 19:30 AS 19:45 | 60 | 0 | 0 | 1 | 61 | 62 | 318 |
| 19:45 AS 20:00 | 58 | 0 | 2 | 1 | 61 | 65 | 294 |

MOV. 24 > 22

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|------|------|----------|--------|-------|-------------|-----------|
| 17:00 AS 17:15 | 60 | 0 | 0 | 1 | 61 | 62 | |
| 17:15 AS 17:30 | 57 | 0 | 0 | 0 | 57 | 57 | |
| 17:30 AS 17:45 | 61 | 0 | 0 | 0 | 61 | 61 | |
| 17:45 AS 18:00 | 55 | 0 | 0 | 0 | 55 | 55 | 235 |
| 18:00 AS 18:15 | 47 | 0 | 0 | 0 | 47 | 47 | 220 |
| 18:15 AS 18:30 | 51 | 0 | 0 | 0 | 51 | 51 | 214 |
| 18:30 AS 18:45 | 42 | 0 | 0 | 1 | 43 | 44 | 197 |
| 18:45 AS 19:00 | 44 | 0 | 0 | 0 | 44 | 44 | 186 |
| 19:00 AS 19:15 | 39 | 0 | 0 | 1 | 40 | 41 | 180 |
| 19:15 AS 19:30 | 31 | 0 | 1 | 0 | 32 | 34 | 163 |
| 19:30 AS 19:45 | 35 | 0 | 2 | 0 | 37 | 40 | 159 |
| 19:45 AS 20:00 | 27 | 0 | 0 | 1 | 28 | 29 | 144 |

MOV. 24 > 23

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 76 | 0 | 1 | 0 | 77 | 79 | |
| 17:15 AS 17:30 | 84 | 0 | 0 | 1 | 85 | 86 | |
| 17:30 AS 17:45 | 99 | 0 | 2 | 0 | 101 | 104 | |
| 17:45 AS 18:00 | 103 | 0 | 0 | 0 | 103 | 103 | 372 |
| 18:00 AS 18:15 | 119 | 0 | 1 | 1 | 121 | 124 | 417 |
| 18:15 AS 18:30 | 124 | 0 | 2 | 2 | 128 | 133 | 464 |
| 18:30 AS 18:45 | 117 | 0 | 0 | 1 | 118 | 119 | 479 |
| 18:45 AS 19:00 | 117 | 0 | 0 | 3 | 120 | 123 | 499 |
| 19:00 AS 19:15 | 132 | 0 | 1 | 2 | 135 | 139 | 514 |
| 19:15 AS 19:30 | 152 | 0 | 0 | 2 | 154 | 156 | 537 |
| 19:30 AS 19:45 | 111 | 0 | 1 | 2 | 114 | 118 | 535 |
| 19:45 AS 20:00 | 89 | 0 | 0 | 1 | 90 | 91 | 503 |

MOV. 34 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 188 | 0 | 1 | 1 | 190 | 193 | |
| 17:15 AS 17:30 | 169 | 0 | 0 | 2 | 171 | 173 | |
| 17:30 AS 17:45 | 183 | 0 | 1 | 0 | 184 | 186 | |
| 17:45 AS 18:00 | 168 | 0 | 0 | 0 | 168 | 168 | 719 |
| 18:00 AS 18:15 | 176 | 0 | 0 | 2 | 178 | 180 | 707 |
| 18:15 AS 18:30 | 184 | 0 | 2 | 2 | 188 | 193 | 727 |
| 18:30 AS 18:45 | 178 | 0 | 0 | 1 | 179 | 180 | 721 |
| 18:45 AS 19:00 | 189 | 0 | 0 | 3 | 192 | 195 | 748 |
| 19:00 AS 19:15 | 184 | 0 | 1 | 4 | 189 | 195 | 763 |
| 19:15 AS 19:30 | 204 | 0 | 1 | 2 | 207 | 211 | 780 |
| 19:30 AS 19:45 | 155 | 0 | 1 | 3 | 159 | 164 | 764 |
| 19:45 AS 20:00 | 132 | 0 | 0 | 1 | 133 | 134 | 703 |

MOV. 35 > 32

| | AUTO | MOTO | CAMINHÃO | ÔNIBUS | TOTAL | VEIC.EQUIV. | HORA PICO |
|----------------|-------------|-------------|-----------------|---------------|--------------|--------------------|------------------|
| 17:00 AS 17:15 | 66 | 0 | 1 | 0 | 67 | 69 | |
| 17:15 AS 17:30 | 84 | 0 | 0 | 0 | 84 | 84 | |
| 17:30 AS 17:45 | 69 | 0 | 2 | 0 | 71 | 74 | |
| 17:45 AS 18:00 | 82 | 0 | 0 | 0 | 82 | 82 | 309 |
| 18:00 AS 18:15 | 80 | 0 | 0 | 0 | 80 | 80 | 320 |
| 18:15 AS 18:30 | 80 | 0 | 0 | 0 | 80 | 80 | 316 |
| 18:30 AS 18:45 | 71 | 0 | 0 | 0 | 71 | 71 | 313 |
| 18:45 AS 19:00 | 59 | 0 | 0 | 0 | 59 | 59 | 290 |
| 19:00 AS 19:15 | 71 | 0 | 0 | 0 | 71 | 71 | 281 |
| 19:15 AS 19:30 | 57 | 0 | 0 | 0 | 57 | 57 | 258 |
| 19:30 AS 19:45 | 51 | 0 | 0 | 0 | 51 | 51 | 238 |
| 19:45 AS 20:00 | 42 | 0 | 0 | 0 | 42 | 42 | 221 |

Nós 70, 32 e 33 - Dia 24/10/2019

MANHÃ

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|-------------|-------------|----------------|----------------|----------------|--|
| 2820 | | 07:00 AS 07:15 | | 07:00 AS 07:15 | |
| 2828 | | 07:15 AS 07:30 | | 07:15 AS 07:30 | |
| 3134 | | 07:30 AS 07:45 | | 07:30 AS 07:45 | |
| 2810 | 11592 | 07:45 AS 08:00 | 07:00 AS 08:00 | | |
| 2980 | 11752 | 08:00 AS 08:15 | 07:15 AS 08:15 | | |
| 2722 | 11645 | 08:15 AS 08:30 | 07:30 AS 08:30 | | |
| 2879 | 11391 | 08:30 AS 08:45 | 07:45 AS 08:45 | | |
| 2818 | 11399 | 08:45 AS 09:00 | 08:00 AS 09:00 | | |
| 2606 | 11024 | 09:00 AS 09:15 | 08:15 AS 09:15 | | |
| 2474 | 10777 | 09:15 AS 09:30 | 08:30 AS 09:30 | | |
| 2525 | 10423 | 09:30 AS 09:45 | 08:45 AS 09:45 | | |
| 2343 | 9948 | 09:45 AS 10:00 | 09:00 AS 10:00 | | |

FHP= 0,94

MÁXIMO 11752 HORA-PICO 08:00 AS 08:15 07:15 AS 08:15

ALMOÇO

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|-------------|-------------|----------------|----------------|----------------|--|
| 2.271 | | 11:00 AS 11:15 | | 11:00 AS 11:15 | |
| 2.169 | | 11:15 AS 11:30 | | 11:15 AS 11:30 | |
| 2.459 | | 11:30 AS 11:45 | | 11:30 AS 11:45 | |
| 2.534 | 9.432 | 11:45 AS 12:00 | 11:00 AS 12:00 | | |
| 2.718 | 9.879 | 12:00 AS 12:15 | 11:15 AS 12:15 | | |
| 2.759 | 10.469 | 12:15 AS 12:30 | 11:30 AS 12:30 | | |
| 2.636 | 10.646 | 12:30 AS 12:45 | 11:45 AS 12:45 | | |
| 2.679 | 10.792 | 12:45 AS 13:00 | 12:00 AS 13:00 | | |
| 2.732 | 10.806 | 13:00 AS 13:15 | 12:15 AS 13:15 | | |
| 2.488 | 10.535 | 13:15 AS 13:30 | 12:30 AS 13:30 | | |
| 2.565 | 10.464 | 13:30 AS 13:45 | 12:45 AS 13:45 | | |
| 2.688 | 10.473 | 13:45 AS 14:00 | 13:00 AS 14:00 | | |

FHP= 0,98

MÁXIMO 10806 HORA-PICO 13:00 AS 13:15 12:15 AS 13:15

TARDE

| VEIC.EQUIV. | TOTAL GERAL | | | | |
|-------------|-------------|----------------|----------------|----------------|--|
| 2.765 | | 17:00 AS 17:15 | | 17:00 AS 17:15 | |
| 2.901 | | 17:15 AS 17:30 | | 17:15 AS 17:30 | |
| 2.856 | | 17:30 AS 17:45 | | 17:30 AS 17:45 | |
| 2.637 | 11.159 | 17:45 AS 18:00 | 17:00 AS 18:00 | | |
| 2.998 | 11.392 | 18:00 AS 18:15 | 17:15 AS 18:15 | | |
| 2.804 | 11.294 | 18:15 AS 18:30 | 17:30 AS 18:30 | | |
| 2.639 | 11.078 | 18:30 AS 18:45 | 17:45 AS 18:45 | | |
| 2.732 | 11.173 | 18:45 AS 19:00 | 18:00 AS 19:00 | | |
| 2.685 | 10.859 | 19:00 AS 19:15 | 18:15 AS 19:15 | | |
| 2.608 | 10.664 | 19:15 AS 19:30 | 18:30 AS 19:30 | | |
| 2.401 | 10.425 | 19:30 AS 19:45 | 18:45 AS 19:45 | | |
| 1.975 | 9.668 | 19:45 AS 20:00 | 19:00 AS 20:00 | | |

FHP= 0,95

MÁXIMO 11392 HORA-PICO 18:00 AS 18:15 17:15 AS 18:15

Nós 70, 32 e 33 - Dia 24/10/2019

MANHÃ

08:00 AS 08:15

| | Volume simples | V.C. | % V.C. | fhp |
|--------------|----------------|------|--------|------|
| MOV. 1 > 2 | 79 | 2 | 2,5% | 0,94 |
| MOV. 1 > 3 | 465 | 8 | 1,7% | |
| MOV. 1 > 4 | 101 | 2 | 2,0% | |
| MOV. 2 > 4 | 1.789 | 68 | 3,8% | |
| MOV. 4 > 2 | 1.545 | 88 | 5,7% | |
| MOV. 4 > 3 | 345 | 5 | 1,4% | |
| MOV. 12 > 11 | 233 | 4 | 1,7% | |
| MOV. 12 > 14 | 1.495 | 64 | 4,3% | |
| MOV. 13 > 11 | 728 | 14 | 1,9% | |
| MOV. 13 > 12 | 79 | 6 | 7,6% | |
| MOV. 13 > 14 | 294 | 4 | 1,4% | |
| MOV. 14 > 12 | 1.624 | 90 | 5,5% | |
| MOV. 23 > 21 | 717 | 20 | 2,8% | |
| MOV. 23 > 22 | 55 | 0 | 0,0% | |
| MOV. 24 > 21 | 383 | 3 | 0,8% | |
| MOV. 24 > 22 | 224 | 10 | 4,5% | |
| MOV. 24 > 23 | 240 | 5 | 2,1% | |
| MOV. 34 > 32 | 461 | 9 | 2,0% | |
| MOV. 35 > 32 | 384 | 7 | 1,8% | |

ALMOÇO

13:00 AS 13:15

| | Volume simples | V.C. | % V.C. | fhp |
|--------------|----------------|------|--------|------|
| MOV. 1 > 2 | 177 | 1 | 0,6% | 0,98 |
| MOV. 1 > 3 | 533 | 6 | 1,1% | |
| MOV. 1 > 4 | 153 | 4 | 2,6% | |
| MOV. 2 > 4 | 1.458 | 48 | 3,3% | |
| MOV. 4 > 2 | 1.518 | 50 | 3,3% | |
| MOV. 4 > 3 | 447 | 6 | 1,3% | |
| MOV. 12 > 11 | 250 | 1 | 0,4% | |
| MOV. 12 > 14 | 1.217 | 42 | 3,5% | |
| MOV. 13 > 11 | 434 | 10 | 2,3% | |
| MOV. 13 > 12 | 99 | 8 | 8,1% | |
| MOV. 13 > 14 | 241 | 6 | 2,5% | |
| MOV. 14 > 12 | 1.695 | 51 | 3,0% | |
| MOV. 23 > 21 | 407 | 13 | 3,2% | |
| MOV. 23 > 22 | 66 | 1 | 1,5% | |
| MOV. 24 > 21 | 366 | 10 | 2,7% | |
| MOV. 24 > 22 | 215 | 5 | 2,3% | |
| MOV. 24 > 23 | 284 | 10 | 3,5% | |
| MOV. 34 > 32 | 558 | 15 | 2,7% | |
| MOV. 35 > 32 | 303 | 6 | 2,0% | |

TARDE

18:00 AS 18:15

| | Volume simples | V.C. | % V.C. | fhp |
|--------------|----------------|------|--------|------|
| MOV. 1 > 2 | 167 | 0 | 0,0% | 0,95 |
| MOV. 1 > 3 | 670 | 5 | 0,7% | |
| MOV. 1 > 4 | 80 | 2 | 2,5% | |
| MOV. 2 > 4 | 1.446 | 65 | 4,5% | |
| MOV. 4 > 2 | 1.724 | 50 | 2,9% | |
| MOV. 4 > 3 | 484 | 6 | 1,2% | |
| MOV. 12 > 11 | 209 | 2 | 1,0% | |
| MOV. 12 > 14 | 1.292 | 61 | 4,7% | |
| MOV. 13 > 11 | 437 | 10 | 2,3% | |
| MOV. 13 > 12 | 95 | 4 | 4,2% | |
| MOV. 13 > 14 | 154 | 4 | 2,6% | |
| MOV. 14 > 12 | 1.891 | 50 | 2,6% | |
| MOV. 23 > 21 | 296 | 14 | 4,7% | |
| MOV. 23 > 22 | 73 | 1 | 1,4% | |
| MOV. 24 > 21 | 390 | 4 | 1,0% | |
| MOV. 24 > 22 | 220 | 0 | 0,0% | |
| MOV. 24 > 23 | 410 | 5 | 1,2% | |
| MOV. 34 > 32 | 701 | 5 | 0,7% | |
| MOV. 35 > 32 | 317 | 2 | 0,6% | |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

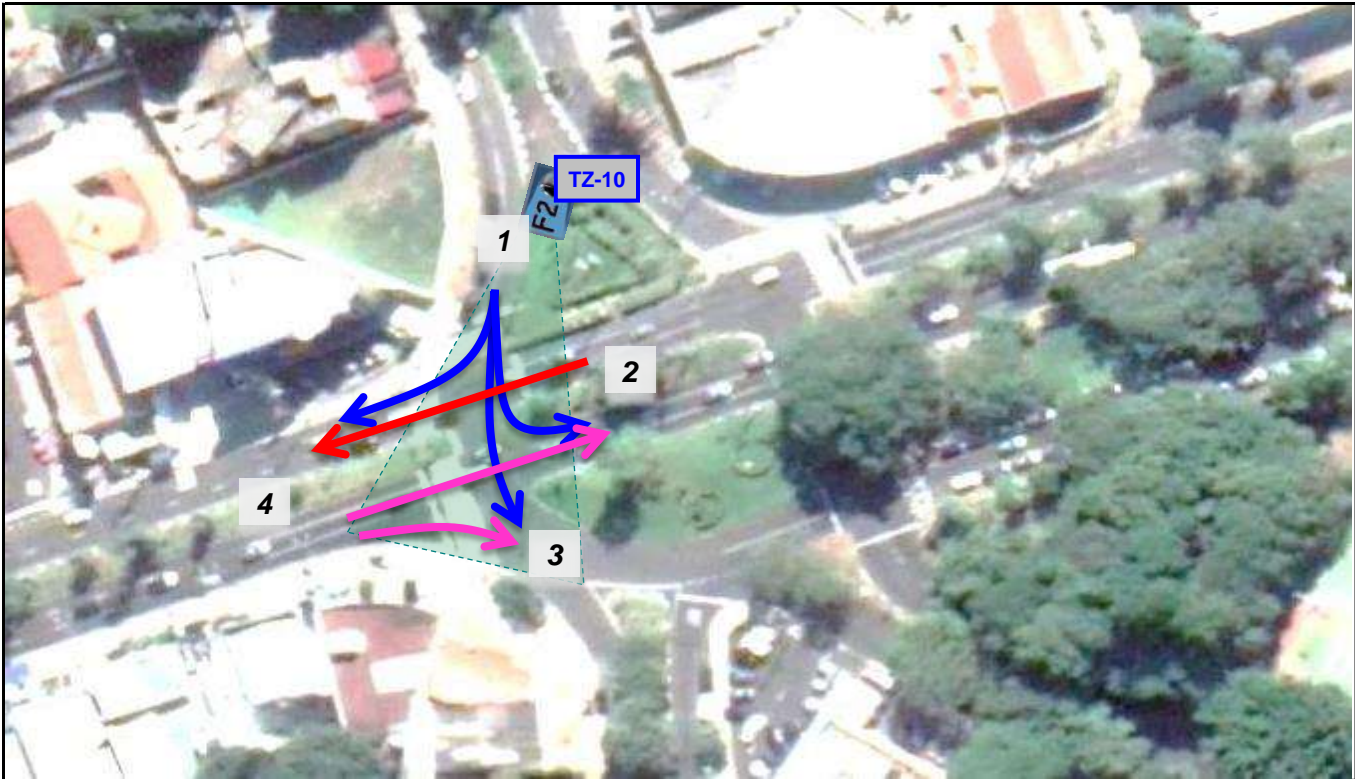
001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado

Ref.: RT-AAP.001-3J21-001_20191022_A

Campinas - SP

Novembro de 2019

Croquis **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado -**
22/10/2019



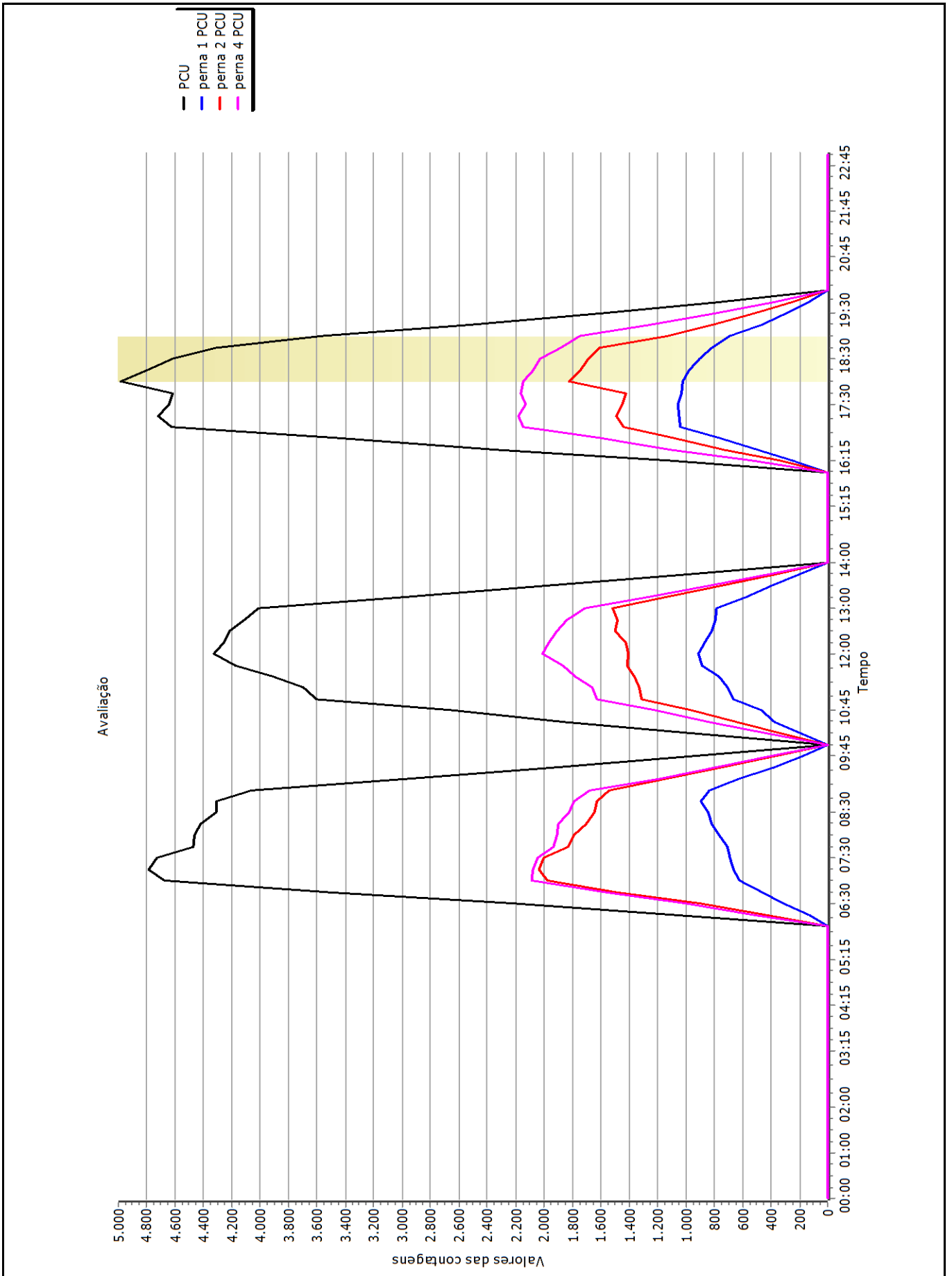
Vídeos



Movimentos Contados

- 1 > 2 Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales
- 1 > 3 Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira
- 1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales
- 2 > 4 Av. Dr. Morães Sales em frente
- 4 > 2 Av. Dr. Morães Sales em frente
- 4 > 3 Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira

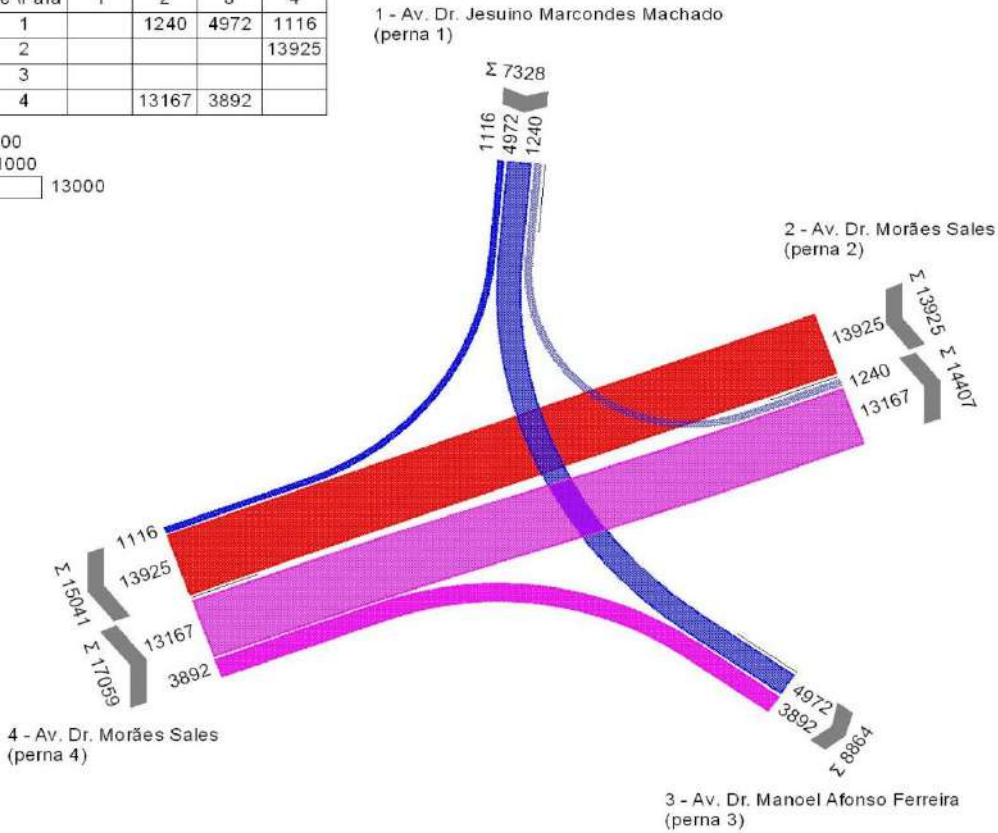
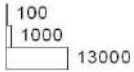
Perfil Horário 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019



Volume Total Diário

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Total On the basis of a time period 22.10.2019 00:00 - 23.10.2019 00:00
 38312 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|-------|------|-------|
| 1 | | 1240 | 4972 | 1116 |
| 2 | | | | 13925 |
| 3 | | | | |
| 4 | | 13167 | 3892 | |



Volume Hora Pico

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Hora de pico 18:00 - 19:00
 On the basis of a time period 22.10.2019 00:00 - 23.10.2019 00:00
 4987 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 172 | 760 | 88 |
| 2 | | | | 1820 |
| 3 | | | | |
| 4 | | 1667 | 480 | |

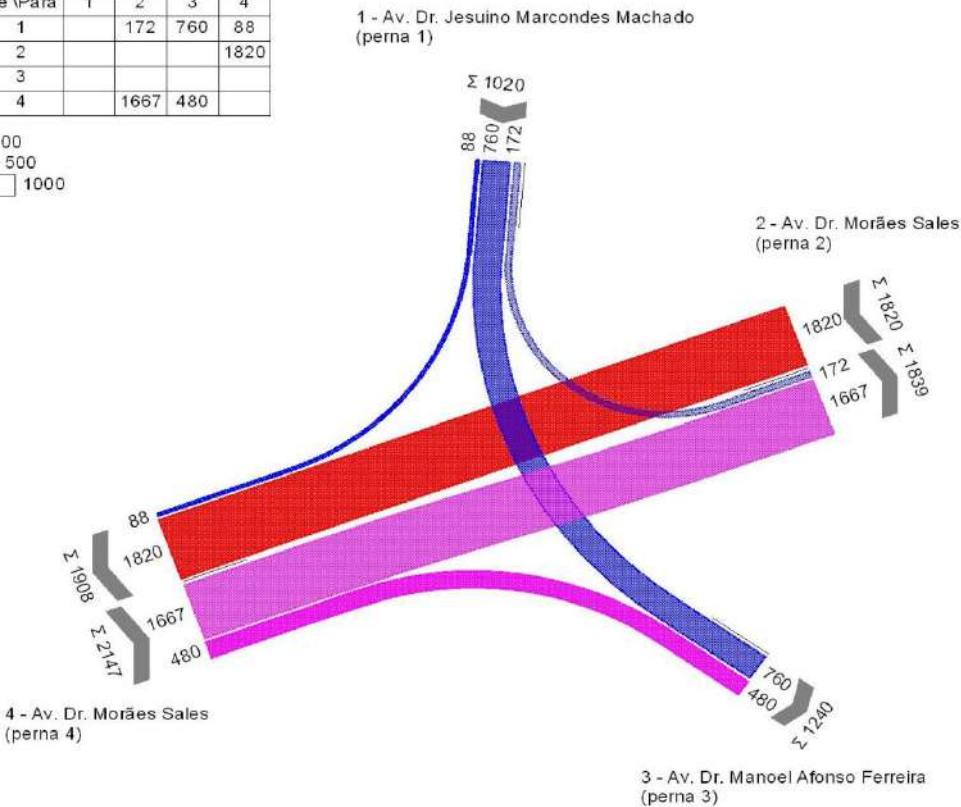
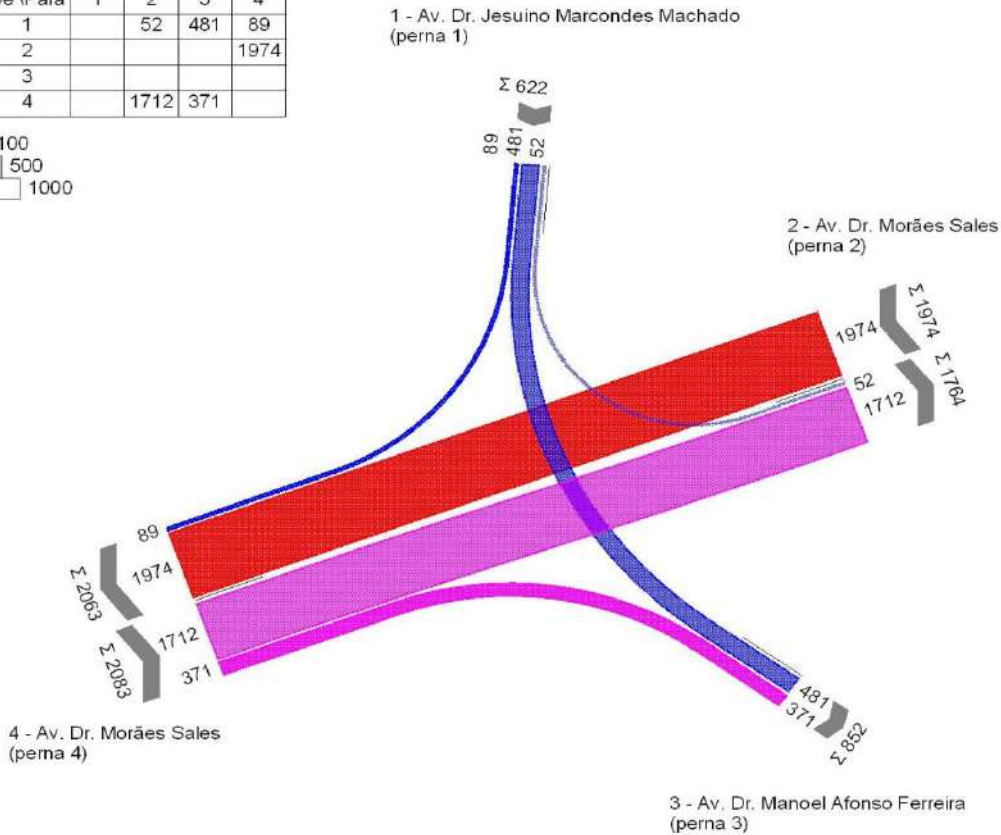


Diagrama de Fluxos **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019**

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 22.10.2019 07:00 - 22.10.2019 08:00
 4679 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 52 | 481 | 89 |
| 2 | | | | 1974 |
| 3 | | | | |
| 4 | | 1712 | 371 | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 22.10.2019 08:00 - 22.10.2019 09:00
 4463 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 110 | 500 | 160 |
| 2 | | | | 1786 |
| 3 | | | | |
| 4 | | 1473 | 434 | |

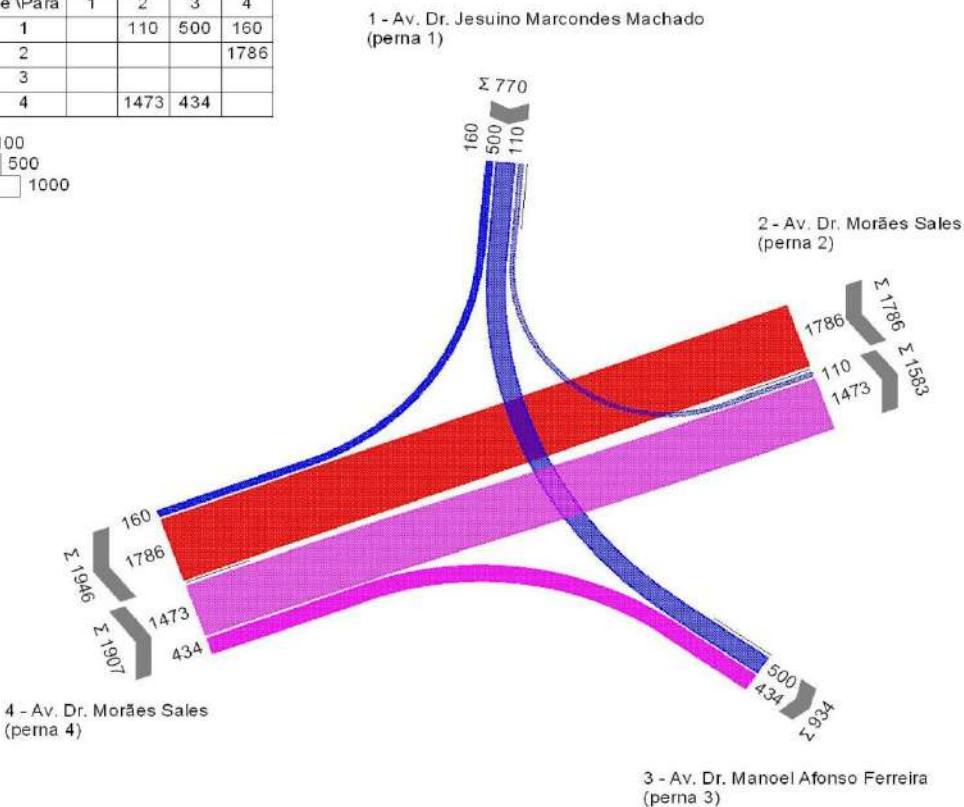


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 22.10.2019 09:00 - 22.10.2019 10:00
 4062 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 126 | 560 | 152 |
| 2 | | | | 1542 |
| 3 | | | | |
| 4 | | 1246 | 436 | |

1 - Av. Dr. Jesuino Marcondes Machado
(perna 1)

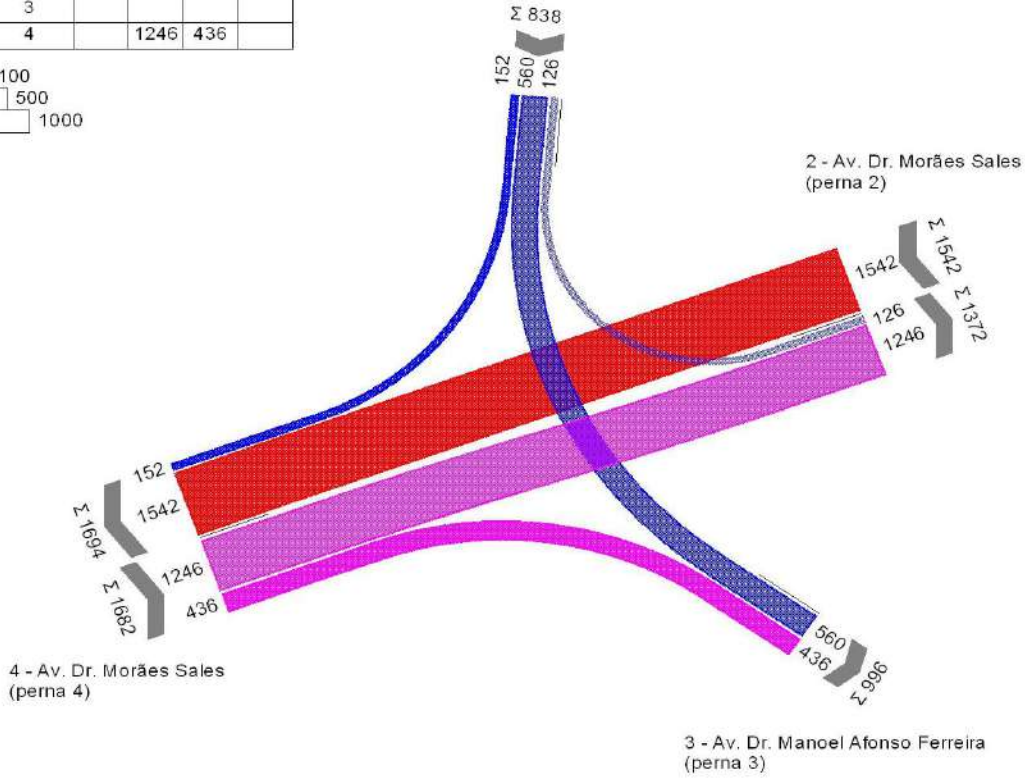
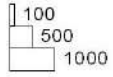
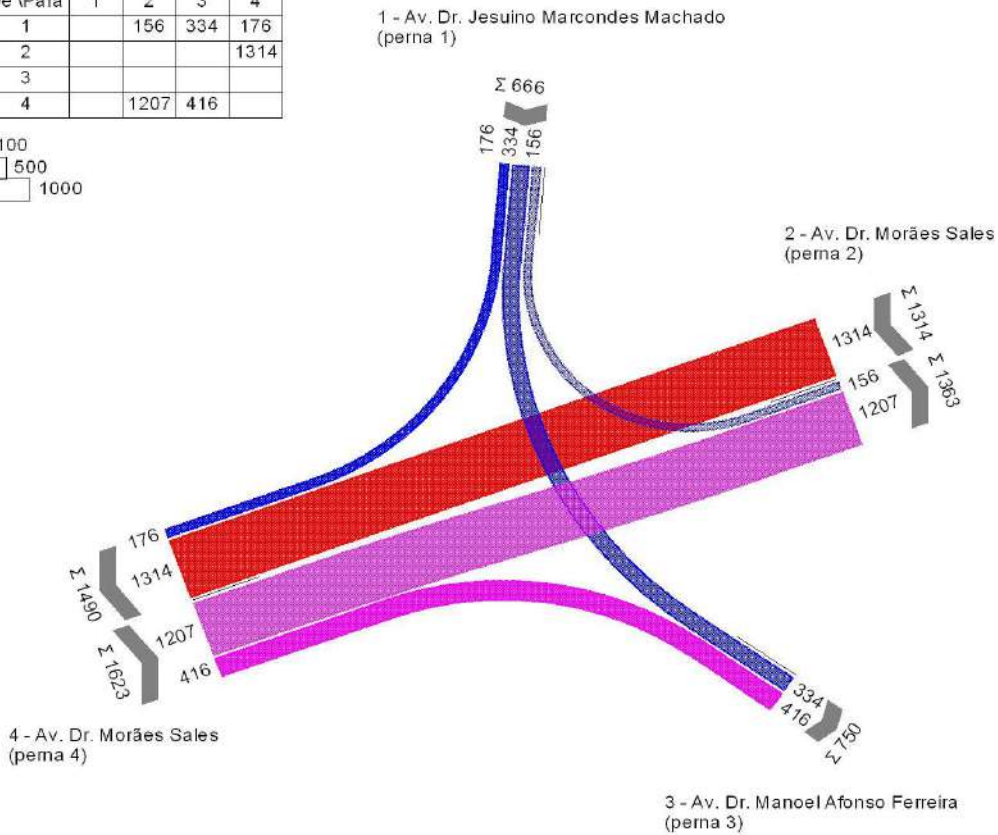
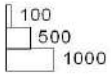


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 22.10.2019 11:00 - 22.10.2019 12:00
 3603 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 156 | 334 | 176 |
| 2 | | | | 1314 |
| 3 | | | | |
| 4 | | 1207 | 416 | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 22.10.2019 12:00 - 22.10.2019 13:00
 4327 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 173 | 584 | 152 |
| 2 | | | | 1408 |
| 3 | | | | |
| 4 | | 1600 | 410 | |

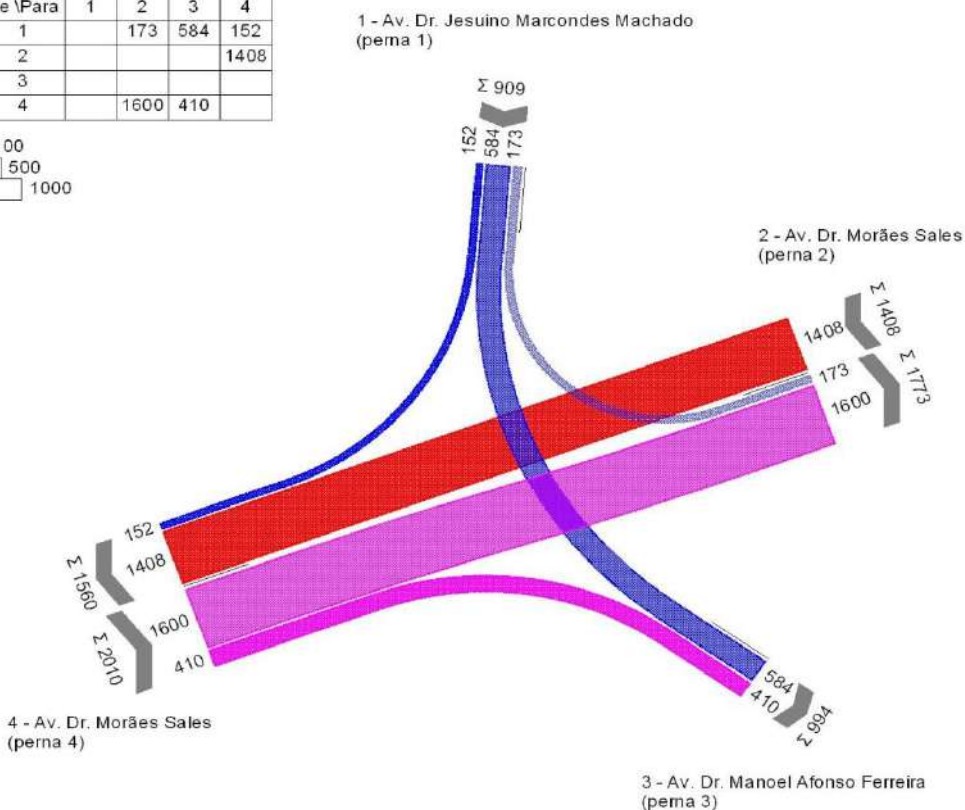
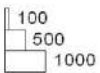


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 22.10.2019 13:00 - 22.10.2019 14:00
 4007 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 134 | 492 | 154 |
| 2 | | | | 1516 |
| 3 | | | | |
| 4 | | 1329 | 382 | |

1 - Av. Dr. Jesuino Marcondes Machado (perna 1)

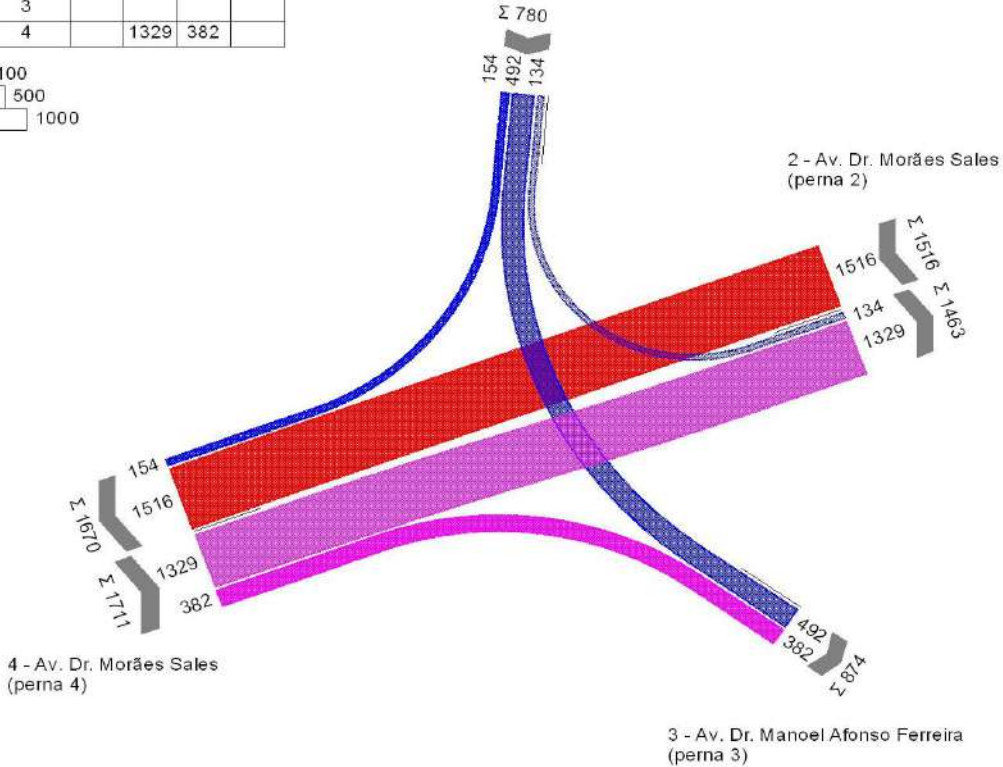
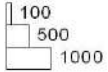
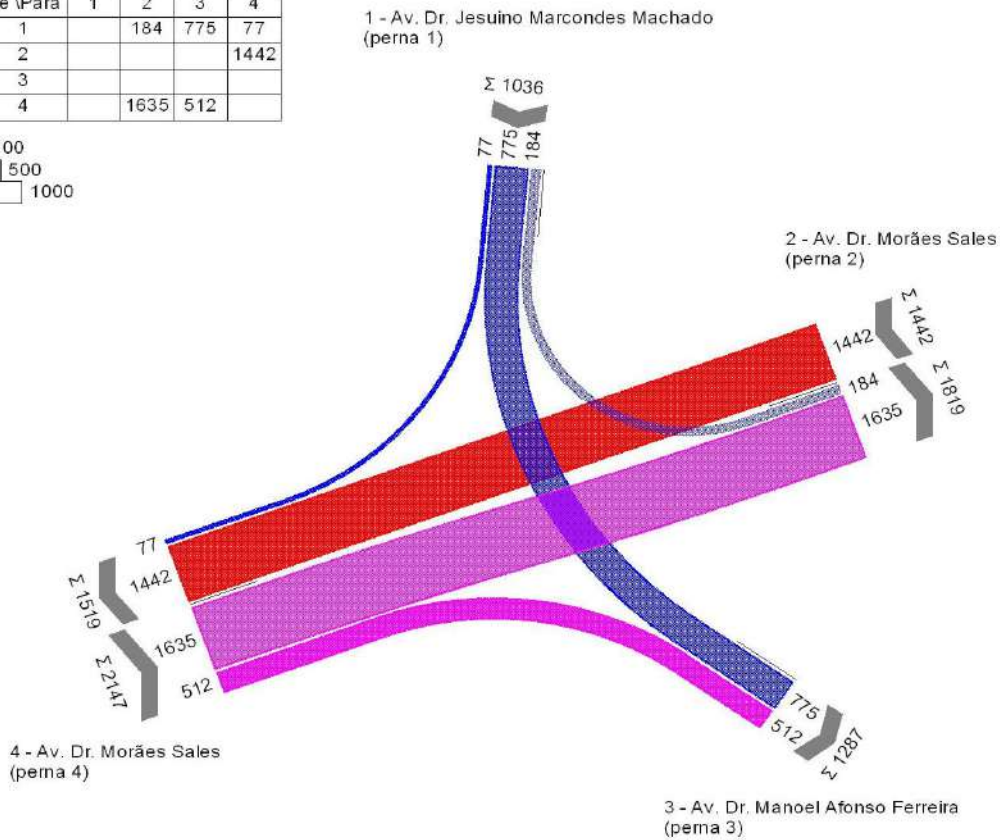
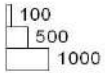


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 22.10.2019 17:00 - 22.10.2019 18:00
 4625 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 184 | 775 | 77 |
| 2 | | | | 1442 |
| 3 | | | | |
| 4 | | 1635 | 512 | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 22.10.2019 18:00 - 22.10.2019 19:00
 4987 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 172 | 760 | 88 |
| 2 | | | | 1820 |
| 3 | | | | |
| 4 | | 1667 | 480 | |

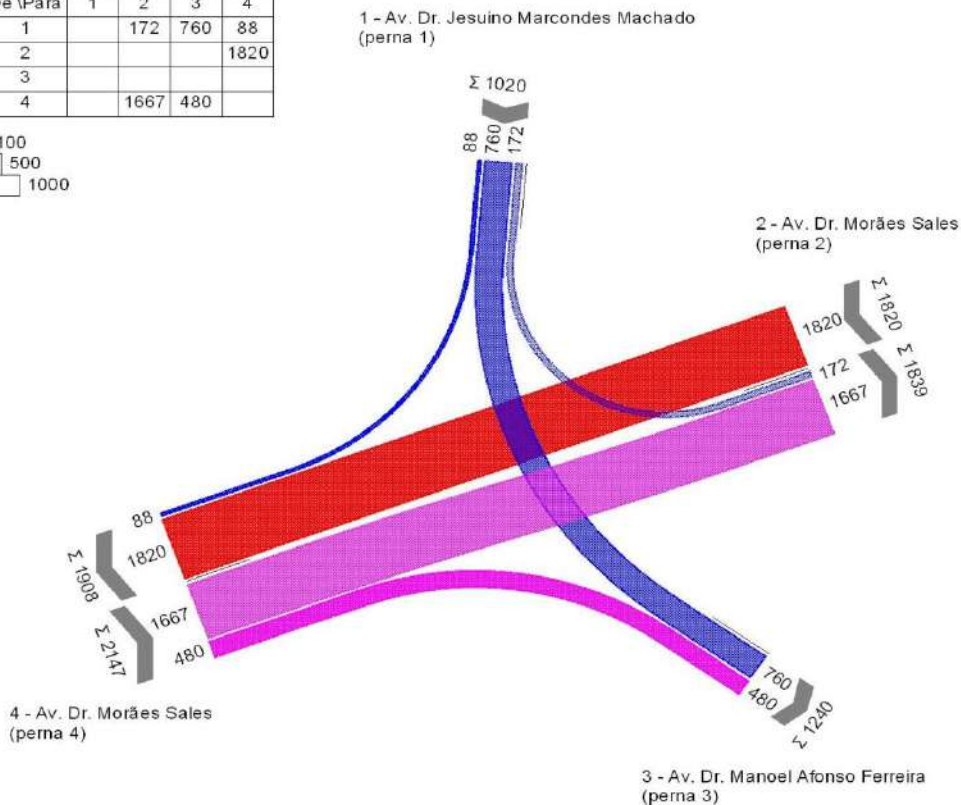
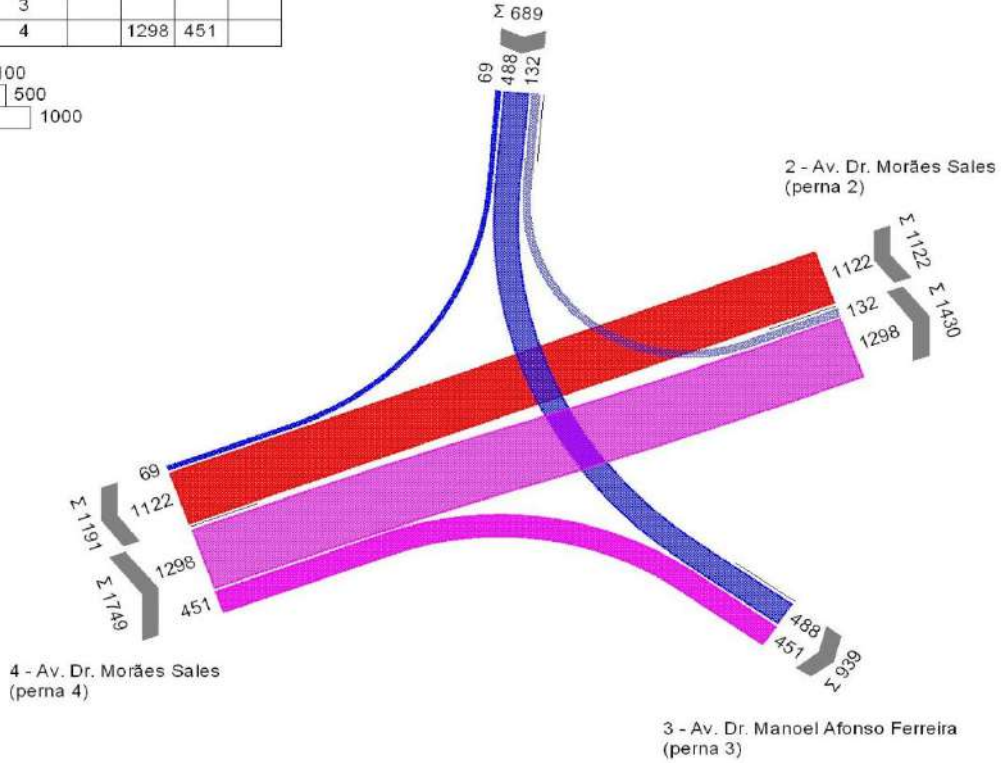
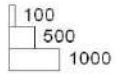


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 22.10.2019 19:00 - 22.10.2019 20:00
 3560 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 132 | 488 | 69 |
| 2 | | | | 1122 |
| 3 | | | | |
| 4 | | 1298 | 451 | |

1 - Av. Dr. Jesuino Marcondes Machado
(perna 1)



PCU

001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

1 > 2 Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 50 | 0 | 1 | 0 | 0 | 53 | 51 |
| 8:00 | 9:00 | 102 | 0 | 3 | 0 | 0 | 110 | 105 |
| 9:00 | 10:00 | 109 | 0 | 7 | 0 | 0 | 127 | 116 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 144 | 0 | 4 | 1 | 0 | 156 | 149 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 173 | 0 | 0 | 0 | 0 | 173 | 173 |
| 13:00 | 14:00 | 129 | 0 | 2 | 0 | 0 | 134 | 131 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 184 | 0 | 0 | 0 | 0 | 184 | 184 |
| 18:00 | 19:00 | 170 | 0 | 1 | 0 | 0 | 173 | 171 |
| 19:00 | 20:00 | 132 | 0 | 0 | 0 | 0 | 132 | 132 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 2
Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|----|----------------|-------|-----|---|-------|-----|---|-----|-----|--|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 42 | 0 | 0 | 0 | 0 | 42 | 42 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 38 | 0 | 0 | 0 | 0 | 38 | 38 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 43 | 0 | 0 | 0 | 0 | 43 | 43 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 50 | 0 | 0 | 0 | 0 | 50 | 50 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 37 | 0 | 1 | 0 | 0 | 40 | 38 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 34 | 0 | 0 | 0 | 0 | 34 | 34 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 20 | 0 | 1 | 0 | 0 | 23 | 21 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 38 | 0 | 0 | 0 | 0 | 38 | 38 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 41 | 0 | 0 | 0 | 0 | 41 | 41 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 53 | 0 | 0 | 0 | 0 | 53 | 53 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 44 | 0 | 0 | 0 | 0 | 44 | 44 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 46 | 0 | 0 | 0 | 0 | 46 | 46 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 53 | 0 | 0 | 0 | 0 | 53 | 53 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 49 | 0 | 0 | 0 | 0 | 49 | 49 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 41 | 0 | 1 | 0 | 0 | 44 | 42 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 27 | 0 | 0 | 0 | 0 | 27 | 27 | |
| 7:00 | 7:15 | 8 | 0 | 1 | 0 | 0 | 11 | 9 | 9 | 19:00 | 19:15 | 39 | 0 | 0 | 0 | 0 | 39 | 39 | |
| 7:15 | 7:30 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 11 | 19:15 | 19:30 | 32 | 0 | 0 | 0 | 0 | 32 | 32 | |
| 7:30 | 7:45 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 12 | 19:30 | 19:45 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | |
| 7:45 | 8:00 | 19 | 0 | 0 | 0 | 0 | 19 | 19 | 19 | 19:45 | 20:00 | 31 | 0 | 0 | 0 | 0 | 31 | 31 | |
| 8:00 | 8:15 | 19 | 0 | 0 | 0 | 0 | 19 | 19 | 19 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 30 | 0 | 2 | 0 | 0 | 35 | 32 | 32 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 29 | 0 | 1 | 0 | 0 | 32 | 30 | 30 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 24 | 0 | 0 | 0 | 0 | 24 | 24 | 24 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 28 | 0 | 1 | 0 | 0 | 31 | 29 | 29 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 23 | 0 | 1 | 0 | 0 | 26 | 24 | 24 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 28 | 0 | 4 | 0 | 0 | 38 | 32 | 32 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 30 | 0 | 1 | 0 | 0 | 33 | 31 | 31 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 37 | 0 | 1 | 0 | 0 | 40 | 38 | 38 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 33 | 0 | 1 | 0 | 0 | 36 | 34 | 34 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 30 | 0 | 1 | 1 | 0 | 35 | 32 | 32 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 44 | 0 | 1 | 0 | 0 | 47 | 45 | 45 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

1 > 3 Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 467 | 0 | 4 | 2 | 0 | 481 | 473 |
| 8:00 | 9:00 | 476 | 0 | 8 | 2 | 0 | 500 | 486 |
| 9:00 | 10:00 | 528 | 0 | 11 | 2 | 0 | 560 | 541 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 324 | 0 | 4 | 0 | 0 | 334 | 328 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 572 | 0 | 3 | 2 | 0 | 584 | 577 |
| 13:00 | 14:00 | 471 | 0 | 6 | 3 | 0 | 492 | 480 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 761 | 0 | 4 | 2 | 0 | 775 | 767 |
| 18:00 | 19:00 | 742 | 0 | 4 | 4 | 0 | 760 | 750 |
| 19:00 | 20:00 | 476 | 0 | 3 | 2 | 0 | 488 | 481 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 3
Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|-----|
| Período de | | Car | - | Truck | Bus | - | PCU | VEC | | Período de | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 147 | 0 | 0 | 1 | 0 | 149 | | 148 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 164 | 0 | 1 | 0 | 0 | 167 | 584 | 165 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:30 | 12:45 | 132 | 0 | 2 | 0 | 0 | 137 | | 134 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 129 | 0 | 0 | 1 | 0 | 131 | | 130 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 117 | 0 | 2 | 0 | 0 | 122 | | 119 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 115 | 0 | 1 | 1 | 0 | 120 | 492 | 117 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 118 | 0 | 2 | 0 | 0 | 123 | | 120 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 121 | 0 | 1 | 2 | 0 | 128 | | 124 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 186 | 0 | 0 | 0 | 0 | 186 | | 186 | 775 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 171 | 0 | 1 | 0 | 0 | 174 | 172 | | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 201 | 0 | 1 | 1 | 0 | 206 | 203 | | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 203 | 0 | 2 | 1 | 0 | 210 | 206 | | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 190 | 0 | 1 | 0 | 0 | 193 | 191 | 760 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 182 | 0 | 2 | 3 | 0 | 193 | 187 | | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 183 | 0 | 0 | 0 | 0 | 183 | 183 | | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 187 | 0 | 1 | 1 | 0 | 192 | 189 | | |
| 7:00 | 7:15 | 95 | 0 | 1 | 0 | 0 | 98 | | 96 | 19:00 | 19:15 | 158 | 0 | 1 | 1 | 0 | 163 | 160 | 488 | |
| 7:15 | 7:30 | 153 | 0 | 1 | 1 | 0 | 158 | 481 | 155 | 19:15 | 19:30 | 131 | 0 | 1 | 0 | 0 | 134 | 132 | | |
| 7:30 | 7:45 | 111 | 0 | 0 | 0 | 0 | 111 | | 111 | 19:30 | 19:45 | 106 | 0 | 1 | 1 | 0 | 111 | 108 | | |
| 7:45 | 8:00 | 108 | 0 | 2 | 1 | 0 | 115 | | 111 | 19:45 | 20:00 | 81 | 0 | 0 | 0 | 0 | 81 | 81 | | |
| 8:00 | 8:15 | 106 | 0 | 2 | 2 | 0 | 115 | | 110 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 131 | 0 | 2 | 0 | 0 | 136 | 500 | 133 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 93 | 0 | 1 | 0 | 0 | 96 | | 94 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 146 | 0 | 3 | 0 | 0 | 154 | | 149 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 145 | 0 | 0 | 0 | 0 | 145 | | 145 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 161 | 0 | 5 | 2 | 0 | 178 | 560 | 168 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 123 | 0 | 4 | 0 | 0 | 133 | | 127 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 99 | 0 | 2 | 0 | 0 | 104 | | 101 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 109 | 0 | 0 | 0 | 0 | 109 | | 109 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 99 | 0 | 2 | 0 | 0 | 104 | 334 | 101 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 11 | 0 | 1 | 0 | 0 | 14 | | 12 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 105 | 0 | 1 | 0 | 0 | 108 | | 106 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 89 | 0 | 0 | 0 | 0 | 89 | 89 |
| 8:00 | 9:00 | 151 | 0 | 3 | 1 | 0 | 161 | 155 |
| 9:00 | 10:00 | 140 | 0 | 4 | 1 | 0 | 152 | 145 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 168 | 0 | 3 | 0 | 0 | 176 | 171 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 149 | 0 | 1 | 0 | 0 | 152 | 150 |
| 13:00 | 14:00 | 152 | 0 | 1 | 0 | 0 | 155 | 153 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 77 | 0 | 0 | 0 | 0 | 77 | 77 |
| 18:00 | 19:00 | 85 | 0 | 1 | 0 | 0 | 88 | 86 |
| 19:00 | 20:00 | 64 | 0 | 2 | 0 | 0 | 69 | 66 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 4
Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|----|---------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de | | Car | - | Truck | Bus | - | PCU | VEC | | Período de | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 47 | 0 | 0 | 0 | 0 | 47 | | 47 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 35 | 0 | 1 | 0 | 0 | 38 | 152 | 36 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 33 | 0 | 0 | 0 | 0 | 33 | | 33 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 34 | 0 | 0 | 0 | 0 | 34 | | 34 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 37 | 0 | 0 | 0 | 0 | 37 | 155 | 37 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 34 | 0 | 0 | 0 | 0 | 34 | | 34 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 42 | 0 | 1 | 0 | 0 | 45 | | 43 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 39 | 0 | 0 | 0 | 0 | 39 | | 39 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 22 | 0 | 0 | 0 | 0 | 22 | 77 | 22 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 20 | 0 | 0 | 0 | 0 | 20 | | 20 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 18 | 0 | 0 | 0 | 0 | 18 | | 18 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 17 | 0 | 0 | 0 | 0 | 17 | | 17 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 16 | 0 | 0 | 0 | 0 | 16 | 88 | 16 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 13 | 0 | 0 | 0 | 0 | 13 | | 13 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 12 | 0 | 1 | 0 | 0 | 15 | | 13 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 44 | 0 | 0 | 0 | 0 | 44 | | 44 |
| 7:00 | 7:15 | 17 | 0 | 0 | 0 | 0 | 17 | | 17 | 19:00 | 19:15 | 22 | 0 | 0 | 0 | 0 | 22 | 69 | 22 |
| 7:15 | 7:30 | 23 | 0 | 0 | 0 | 0 | 23 | 89 | 23 | 19:15 | 19:30 | 11 | 0 | 0 | 0 | 0 | 11 | | 11 |
| 7:30 | 7:45 | 21 | 0 | 0 | 0 | 0 | 21 | | 21 | 19:30 | 19:45 | 14 | 0 | 0 | 0 | 0 | 14 | | 14 |
| 7:45 | 8:00 | 28 | 0 | 0 | 0 | 0 | 28 | | 28 | 19:45 | 20:00 | 17 | 0 | 2 | 0 | 0 | 22 | | 19 |
| 8:00 | 8:15 | 34 | 0 | 0 | 0 | 0 | 34 | | 34 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 38 | 0 | 1 | 1 | 0 | 43 | 161 | 40 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 37 | 0 | 0 | 0 | 0 | 37 | | 37 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 42 | 0 | 2 | 0 | 0 | 47 | | 44 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 31 | 0 | 2 | 1 | 0 | 38 | | 34 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 39 | 0 | 1 | 0 | 0 | 42 | | 40 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 36 | 0 | 1 | 0 | 0 | 39 | 152 | 37 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 34 | 0 | 0 | 0 | 0 | 34 | | 34 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 49 | 0 | 1 | 0 | 0 | 52 | | 50 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 33 | 0 | 1 | 0 | 0 | 36 | 176 | 34 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 46 | 0 | 0 | 0 | 0 | 46 | | 46 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 40 | 0 | 1 | 0 | 0 | 43 | | 41 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

2 > 4 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1828 | 0 | 19 | 49 | 0 | 1974 | 1896 |
| 8:00 | 9:00 | 1641 | 0 | 27 | 39 | 0 | 1787 | 1707 |
| 9:00 | 10:00 | 1384 | 0 | 41 | 28 | 0 | 1543 | 1453 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1167 | 0 | 42 | 21 | 0 | 1314 | 1230 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1286 | 0 | 29 | 25 | 0 | 1409 | 1340 |
| 13:00 | 14:00 | 1378 | 0 | 37 | 23 | 0 | 1517 | 1438 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1319 | 0 | 13 | 45 | 0 | 1442 | 1377 |
| 18:00 | 19:00 | 1696 | 0 | 9 | 51 | 0 | 1821 | 1756 |
| 19:00 | 20:00 | 1057 | 0 | 9 | 21 | 0 | 1122 | 1087 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
2 > 4 Av. Dr. Morães Sales em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|------|-----|----------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 322 | 0 | 8 | 6 | 0 | 354 | | 336 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 305 | 0 | 7 | 5 | 0 | 333 | 1409 | 317 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 348 | 0 | 8 | 7 | 0 | 382 | | 363 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 311 | 0 | 6 | 7 | 0 | 340 | | 324 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 345 | 0 | 7 | 2 | 0 | 367 | 1517 | 354 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 358 | 0 | 14 | 7 | 0 | 407 | | 379 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 333 | 0 | 7 | 9 | 0 | 369 | | 349 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 342 | 0 | 9 | 5 | 0 | 375 | | 356 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 304 | 0 | 7 | 7 | 0 | 336 | 1442 | 318 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 366 | 0 | 3 | 13 | 0 | 400 | | 382 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 328 | 0 | 2 | 12 | 0 | 357 | | 342 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 321 | 0 | 1 | 13 | 0 | 350 | | 335 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 351 | 0 | 4 | 10 | 0 | 381 | 1821 | 365 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 346 | 0 | 2 | 7 | 0 | 365 | | 355 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 303 | 0 | 1 | 12 | 0 | 330 | | 316 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 696 | 0 | 2 | 22 | 0 | 745 | | 720 |
| 7:00 | 7:15 | 391 | 0 | 2 | 13 | 0 | 422 | | 406 | 19:00 | 19:15 | 290 | 0 | 0 | 7 | 0 | 304 | 1122 | 297 |
| 7:15 | 7:30 | 464 | 0 | 2 | 8 | 0 | 485 | 1974 | 474 | 19:15 | 19:30 | 289 | 0 | 2 | 7 | 0 | 308 | | 298 |
| 7:30 | 7:45 | 535 | 0 | 9 | 10 | 0 | 578 | | 554 | 19:30 | 19:45 | 237 | 0 | 4 | 3 | 0 | 253 | | 244 |
| 7:45 | 8:00 | 438 | 0 | 6 | 18 | 0 | 489 | | 462 | 19:45 | 20:00 | 241 | 0 | 3 | 4 | 0 | 257 | | 248 |
| 8:00 | 8:15 | 435 | 0 | 10 | 13 | 0 | 486 | | 458 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 419 | 0 | 6 | 6 | 0 | 446 | 1787 | 431 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 378 | 0 | 4 | 11 | 0 | 410 | | 393 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 409 | 0 | 7 | 9 | 0 | 445 | | 425 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 375 | 0 | 6 | 8 | 0 | 406 | | 389 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 344 | 0 | 10 | 6 | 0 | 381 | 1543 | 360 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 343 | 0 | 14 | 8 | 0 | 394 | | 365 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 322 | 0 | 11 | 6 | 0 | 362 | | 339 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 310 | 0 | 7 | 5 | 0 | 338 | | 322 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 258 | 0 | 13 | 4 | 0 | 299 | 1314 | 275 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 289 | 0 | 10 | 7 | 0 | 328 | | 306 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 310 | 0 | 12 | 5 | 0 | 350 | | 327 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

4 > 2 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1524 | 0 | 33 | 53 | 0 | 1713 | 1610 |
| 8:00 | 9:00 | 1300 | 0 | 38 | 39 | 0 | 1473 | 1377 |
| 9:00 | 10:00 | 1090 | 0 | 39 | 29 | 0 | 1246 | 1158 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1076 | 0 | 34 | 23 | 0 | 1207 | 1133 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1477 | 0 | 27 | 28 | 0 | 1601 | 1532 |
| 13:00 | 14:00 | 1223 | 0 | 24 | 23 | 0 | 1329 | 1270 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1528 | 0 | 14 | 36 | 0 | 1635 | 1578 |
| 18:00 | 19:00 | 1550 | 0 | 10 | 46 | 0 | 1667 | 1606 |
| 19:00 | 20:00 | 1203 | 0 | 13 | 31 | 0 | 1298 | 1247 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
4 > 2
Av. Dr. Morães Sales em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|------|-----|----------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 355 | 0 | 5 | 3 | 0 | 374 | | 363 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 370 | 0 | 9 | 10 | 0 | 413 | 1601 | 389 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 334 | 0 | 6 | 8 | 0 | 365 | | 348 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 418 | 0 | 7 | 7 | 0 | 450 | | 432 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 310 | 0 | 6 | 5 | 0 | 335 | 1329 | 321 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 336 | 0 | 5 | 5 | 0 | 359 | | 346 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 278 | 0 | 7 | 5 | 0 | 306 | | 290 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 299 | 0 | 6 | 8 | 0 | 330 | | 313 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 365 | 0 | 5 | 6 | 0 | 390 | 1635 | 376 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 432 | 0 | 3 | 9 | 0 | 458 | | 444 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 355 | 0 | 3 | 9 | 0 | 381 | | 367 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 376 | 0 | 3 | 12 | 0 | 408 | | 391 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 406 | 0 | 5 | 11 | 0 | 441 | 1667 | 422 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 398 | 0 | 3 | 11 | 0 | 428 | | 412 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 388 | 0 | 1 | 12 | 0 | 415 | | 401 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 358 | 0 | 1 | 12 | 0 | 385 | | 371 |
| 7:00 | 7:15 | 354 | 0 | 5 | 14 | 0 | 395 | | 373 | 19:00 | 19:15 | 332 | 0 | 4 | 9 | 0 | 360 | 1298 | 345 |
| 7:15 | 7:30 | 364 | 0 | 8 | 11 | 0 | 406 | 1713 | 383 | 19:15 | 19:30 | 344 | 0 | 1 | 8 | 0 | 363 | | 353 |
| 7:30 | 7:45 | 410 | 0 | 9 | 17 | 0 | 467 | | 436 | 19:30 | 19:45 | 263 | 0 | 5 | 7 | 0 | 290 | | 275 |
| 7:45 | 8:00 | 396 | 0 | 11 | 11 | 0 | 446 | | 418 | 19:45 | 20:00 | 264 | 0 | 3 | 7 | 0 | 286 | | 274 |
| 8:00 | 8:15 | 360 | 0 | 10 | 10 | 0 | 405 | | 380 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 319 | 0 | 6 | 10 | 0 | 354 | 1473 | 335 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 306 | 0 | 8 | 13 | 0 | 352 | | 327 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 315 | 0 | 14 | 6 | 0 | 362 | | 335 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 317 | 0 | 14 | 12 | 0 | 376 | | 343 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 234 | 0 | 9 | 4 | 0 | 265 | 1246 | 247 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 272 | 0 | 8 | 8 | 0 | 308 | | 288 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 267 | 0 | 8 | 5 | 0 | 297 | | 280 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 290 | 0 | 14 | 6 | 0 | 337 | | 310 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 256 | 0 | 11 | 7 | 0 | 298 | 1207 | 274 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 257 | 0 | 3 | 4 | 0 | 273 | | 264 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 273 | 0 | 6 | 6 | 0 | 300 | | 285 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

4 > 3 Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 358 | 0 | 2 | 4 | 0 | 371 | 364 |
| 8:00 | 9:00 | 416 | 0 | 7 | 0 | 0 | 434 | 423 |
| 9:00 | 10:00 | 411 | 0 | 9 | 1 | 0 | 436 | 421 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 409 | 0 | 3 | 0 | 0 | 417 | 412 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 403 | 0 | 3 | 0 | 0 | 411 | 406 |
| 13:00 | 14:00 | 372 | 0 | 4 | 0 | 0 | 382 | 376 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 501 | 0 | 2 | 3 | 0 | 512 | 506 |
| 18:00 | 19:00 | 464 | 0 | 3 | 4 | 0 | 480 | 471 |
| 19:00 | 20:00 | 431 | 0 | 4 | 5 | 0 | 451 | 440 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|--------------------------|--|
| Movimento Contado | |
| 4 > 3 | Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 102 | 0 | 1 | 0 | 0 | 105 | 103 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 99 | 0 | 0 | 0 | 0 | 99 | 99 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 100 | 0 | 1 | 0 | 0 | 103 | 101 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 102 | 0 | 1 | 0 | 0 | 105 | 103 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 99 | 0 | 1 | 0 | 0 | 102 | 100 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 91 | 0 | 0 | 0 | 0 | 91 | 91 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 87 | 0 | 2 | 0 | 0 | 92 | 89 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 95 | 0 | 1 | 0 | 0 | 98 | 96 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 130 | 0 | 1 | 1 | 0 | 135 | 132 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 124 | 0 | 0 | 1 | 0 | 126 | 125 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 122 | 0 | 1 | 0 | 0 | 125 | 123 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 125 | 0 | 0 | 1 | 0 | 127 | 126 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 114 | 0 | 0 | 1 | 0 | 116 | 115 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 105 | 0 | 0 | 0 | 0 | 105 | 105 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 121 | 0 | 1 | 1 | 0 | 126 | 123 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 124 | 0 | 2 | 2 | 0 | 133 | 128 | |
| 7:00 | 7:15 | 110 | 0 | 1 | 1 | 0 | 115 | 112 | 112 | 19:00 | 19:15 | 122 | 0 | 1 | 3 | 0 | 131 | 126 | |
| 7:15 | 7:30 | 81 | 0 | 0 | 3 | 0 | 87 | 84 | 84 | 19:15 | 19:30 | 113 | 0 | 0 | 1 | 0 | 115 | 114 | |
| 7:30 | 7:45 | 89 | 0 | 0 | 0 | 0 | 89 | 89 | 89 | 19:30 | 19:45 | 103 | 0 | 1 | 0 | 0 | 106 | 104 | |
| 7:45 | 8:00 | 78 | 0 | 1 | 0 | 0 | 81 | 79 | 79 | 19:45 | 20:00 | 93 | 0 | 2 | 1 | 0 | 100 | 96 | |
| 8:00 | 8:15 | 100 | 0 | 1 | 0 | 0 | 103 | 101 | 101 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 92 | 0 | 3 | 0 | 0 | 100 | 95 | 95 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 90 | 0 | 1 | 0 | 0 | 93 | 91 | 91 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 134 | 0 | 2 | 0 | 0 | 139 | 136 | 136 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 124 | 0 | 1 | 0 | 0 | 127 | 125 | 125 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 99 | 0 | 4 | 1 | 0 | 111 | 104 | 104 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 101 | 0 | 2 | 0 | 0 | 106 | 103 | 103 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 87 | 0 | 2 | 0 | 0 | 92 | 89 | 89 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 103 | 0 | 0 | 0 | 0 | 103 | 103 | 103 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 99 | 0 | 0 | 0 | 0 | 99 | 99 | 99 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 102 | 0 | 1 | 0 | 0 | 105 | 103 | 103 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 105 | 0 | 2 | 0 | 0 | 110 | 107 | 107 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

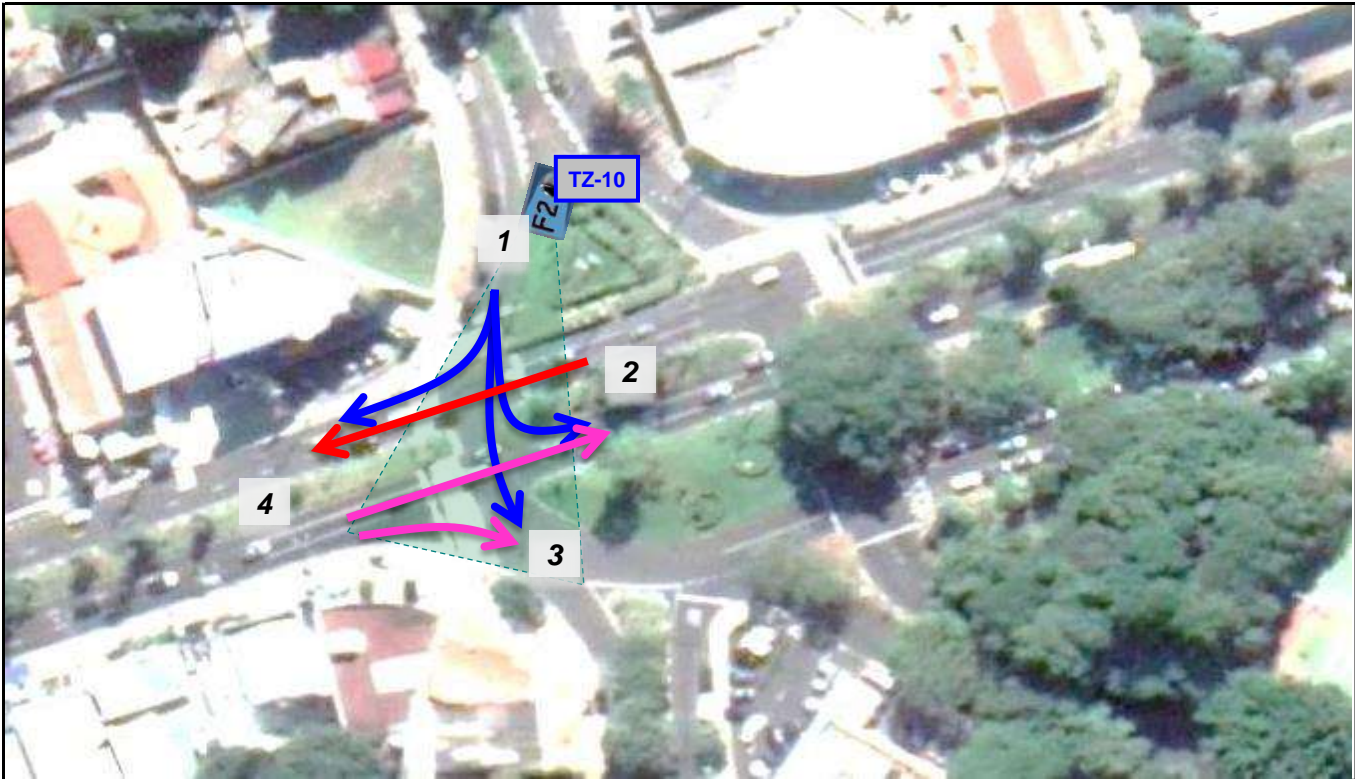
001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado

Ref.: RT-AAP.001-3J21-001_20191023_A

Campinas - SP

Novembro de 2019

Croquis **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019**



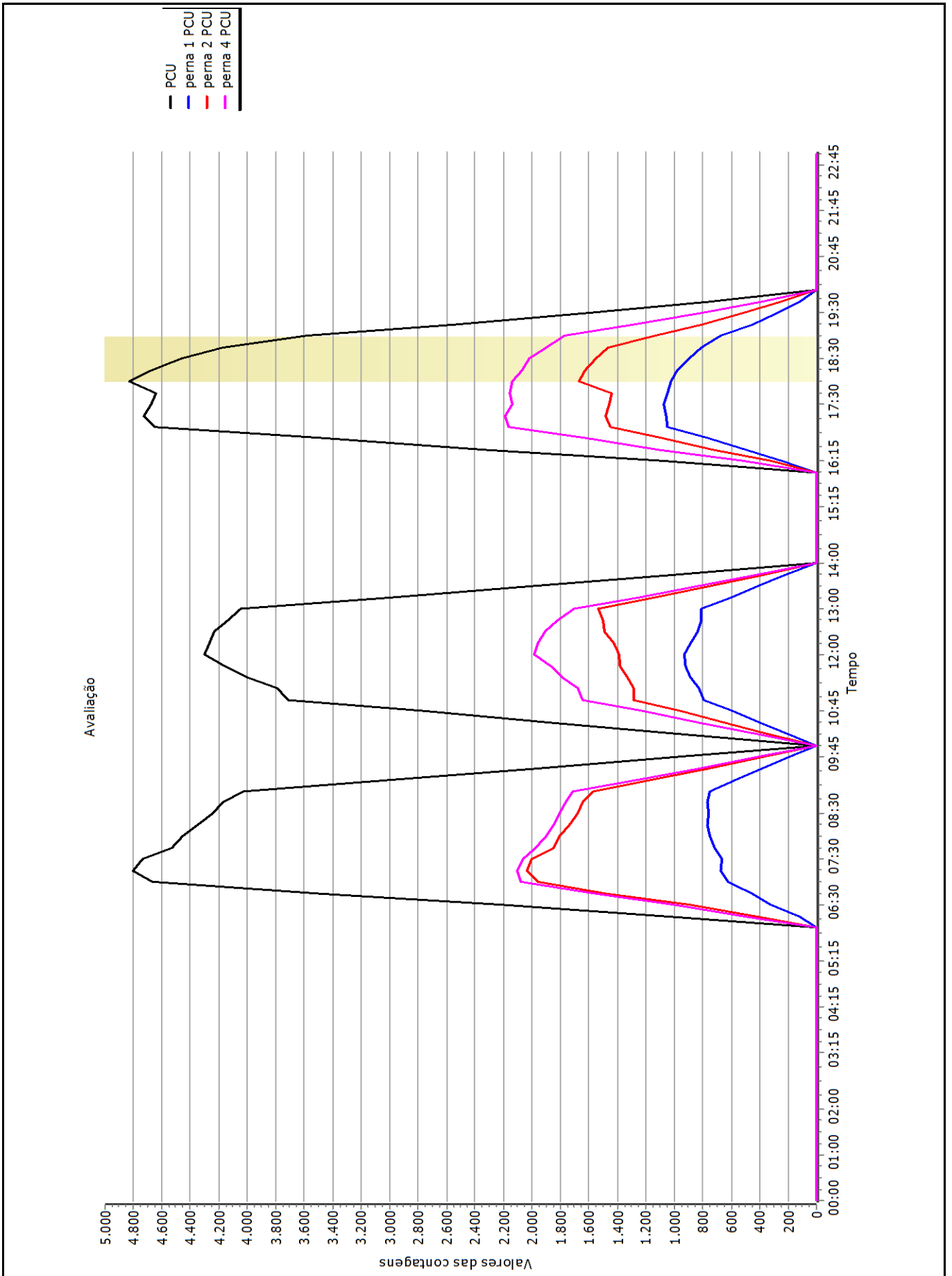
Vídeos



Movimentos Contados

- 1 > 2 Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales
- 1 > 3 Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira
- 1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales
- 2 > 4 Av. Dr. Morães Sales em frente
- 4 > 2 Av. Dr. Morães Sales em frente
- 4 > 3 Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira

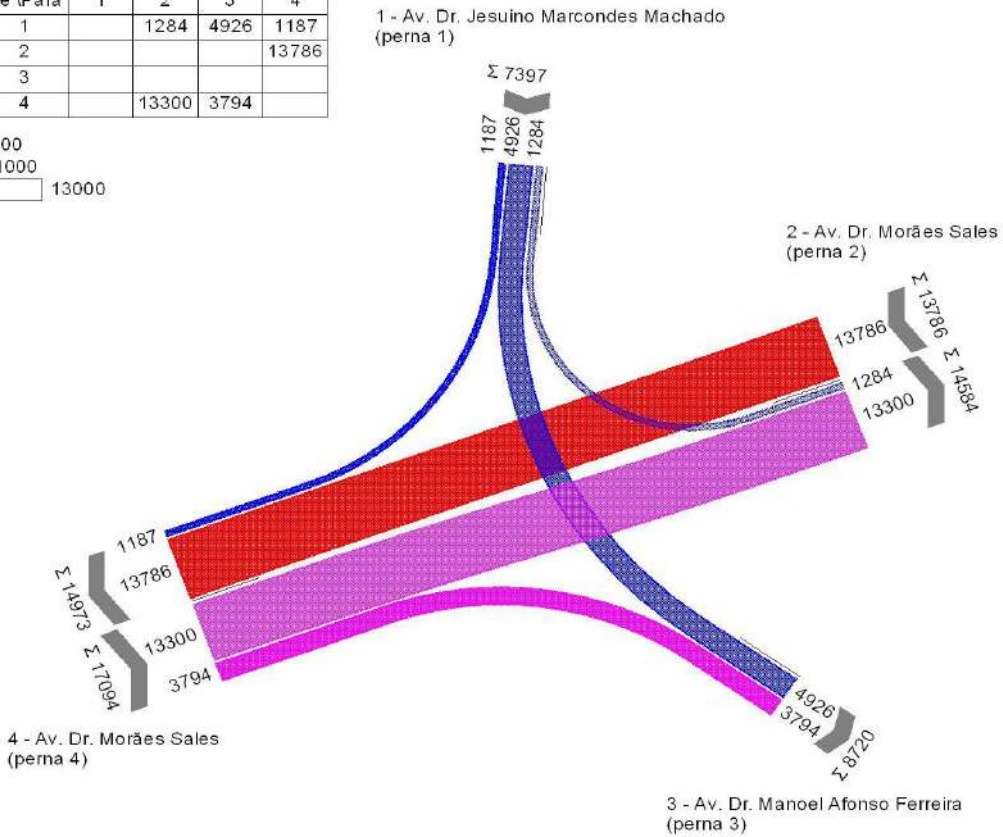
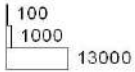
Perfil Horário 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019



Volume Total Diário

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Total On the basis of a time period 23.10.2019 00:00 - 24.10.2019 00:00
 38277 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|-------|------|-------|
| 1 | | 1284 | 4926 | 1187 |
| 2 | | | | 13786 |
| 3 | | | | |
| 4 | | 13300 | 3794 | |



Volume Hora Pico

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Hora de pico 18:00 - 19:00
 On the basis of a time period 23.10.2019 00:00 - 24.10.2019 00:00
 4829 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 180 | 760 | 84 |
| 2 | | | | 1669 |
| 3 | | | | |
| 4 | | 1648 | 488 | |

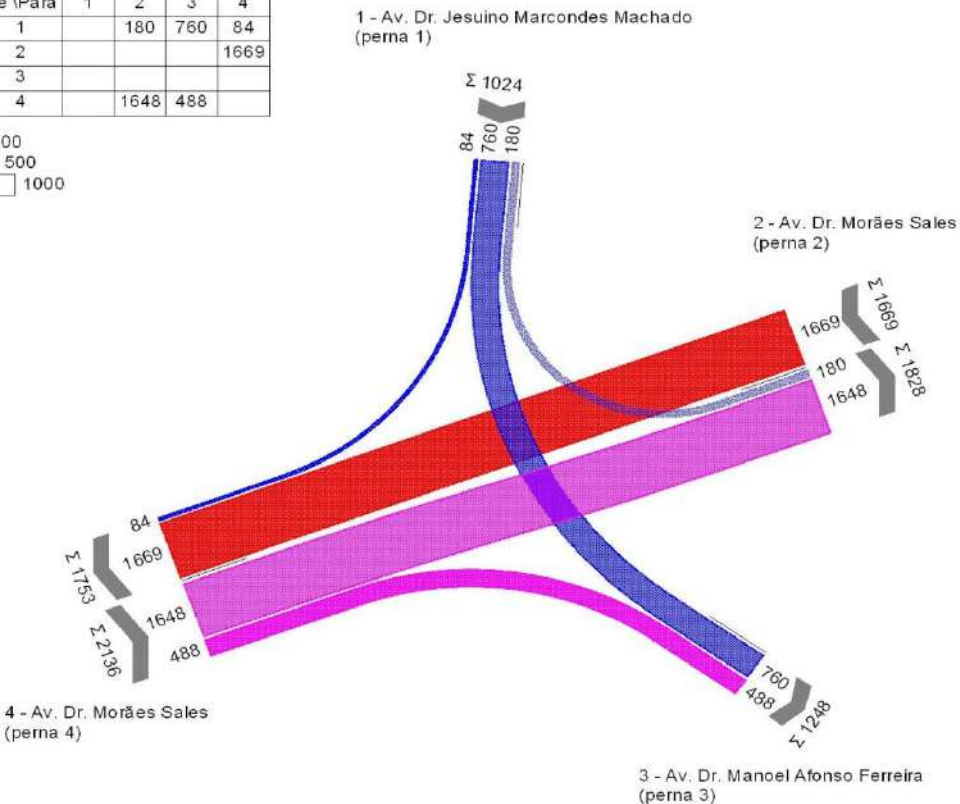
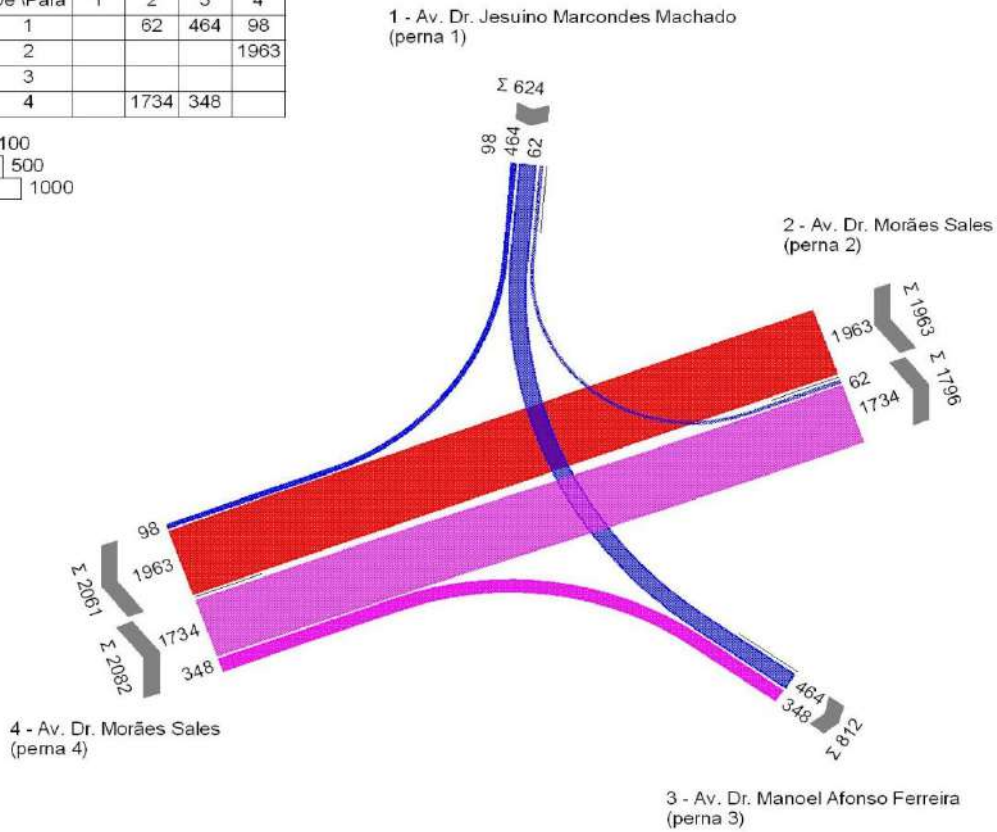
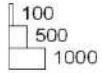


Diagrama de Fluxos **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019**

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 23.10.2019 07:00 - 23.10.2019 08:00
 4669 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 62 | 464 | 98 |
| 2 | | | | 1963 |
| 3 | | | | |
| 4 | | 1734 | 348 | |



Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 23.10.2019 08:00 - 23.10.2019 09:00
 4457 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 102 | 479 | 171 |
| 2 | | | | 1804 |
| 3 | | | | |
| 4 | | 1529 | 372 | |

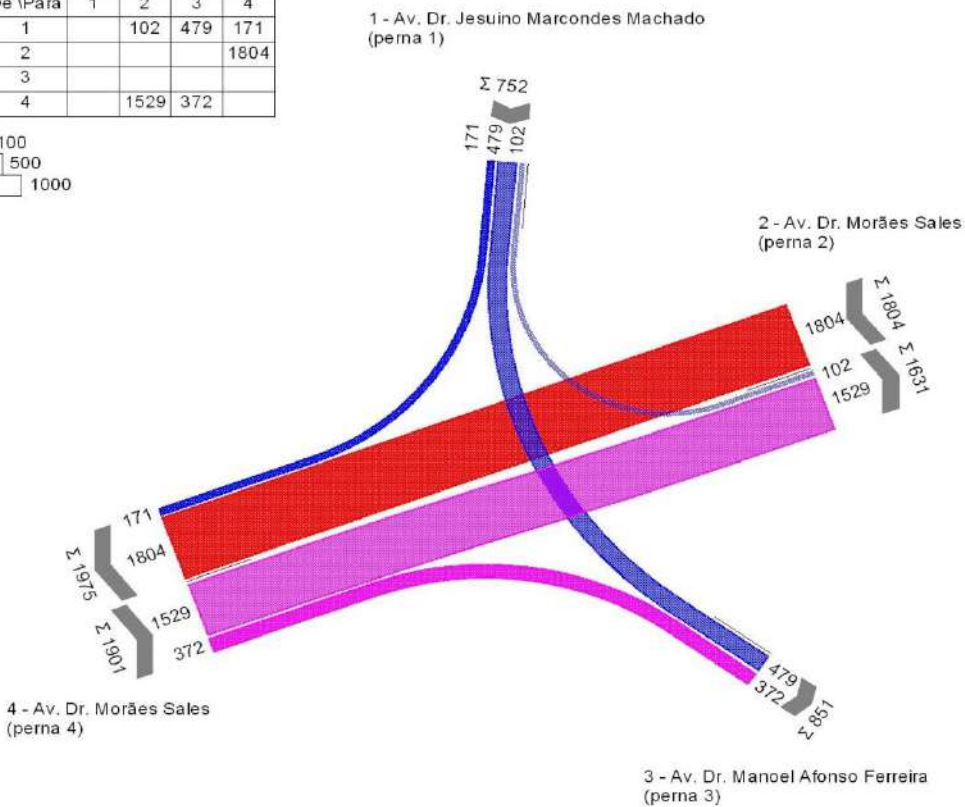
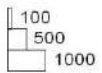


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 23.10.2019 09:00 - 23.10.2019 10:00
 4032 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 132 | 460 | 159 |
| 2 | | | | 1566 |
| 3 | | | | |
| 4 | | 1296 | 419 | |

1 - Av. Dr. Jesuino Marcondes Machado
(perna 1)

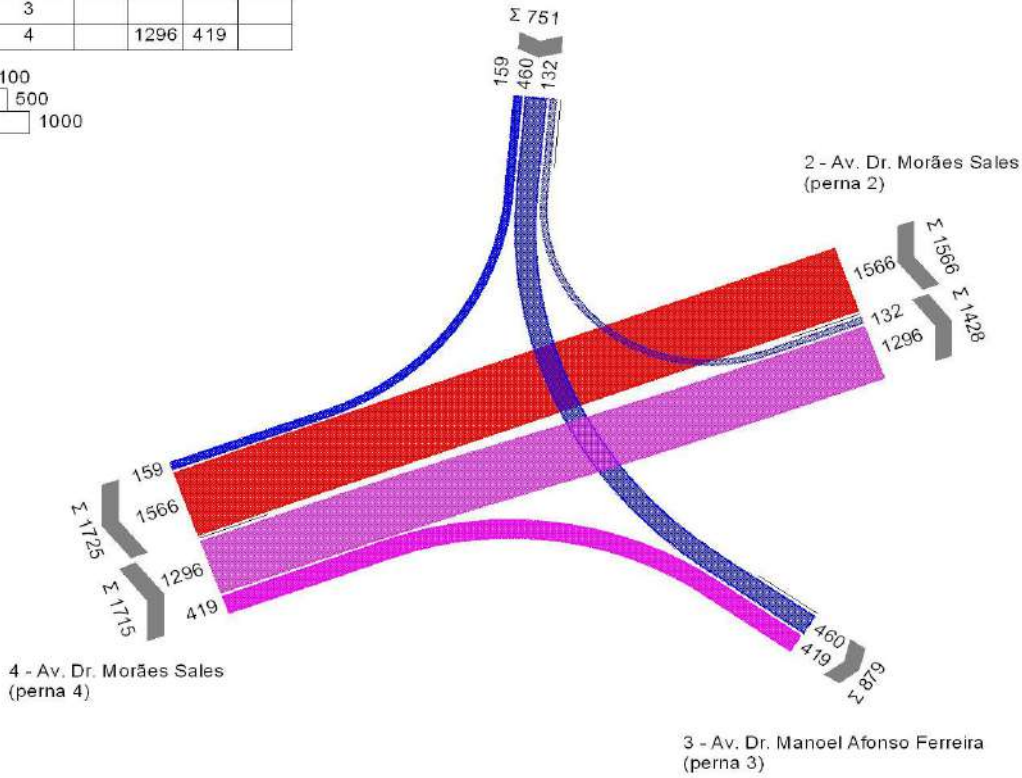
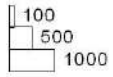
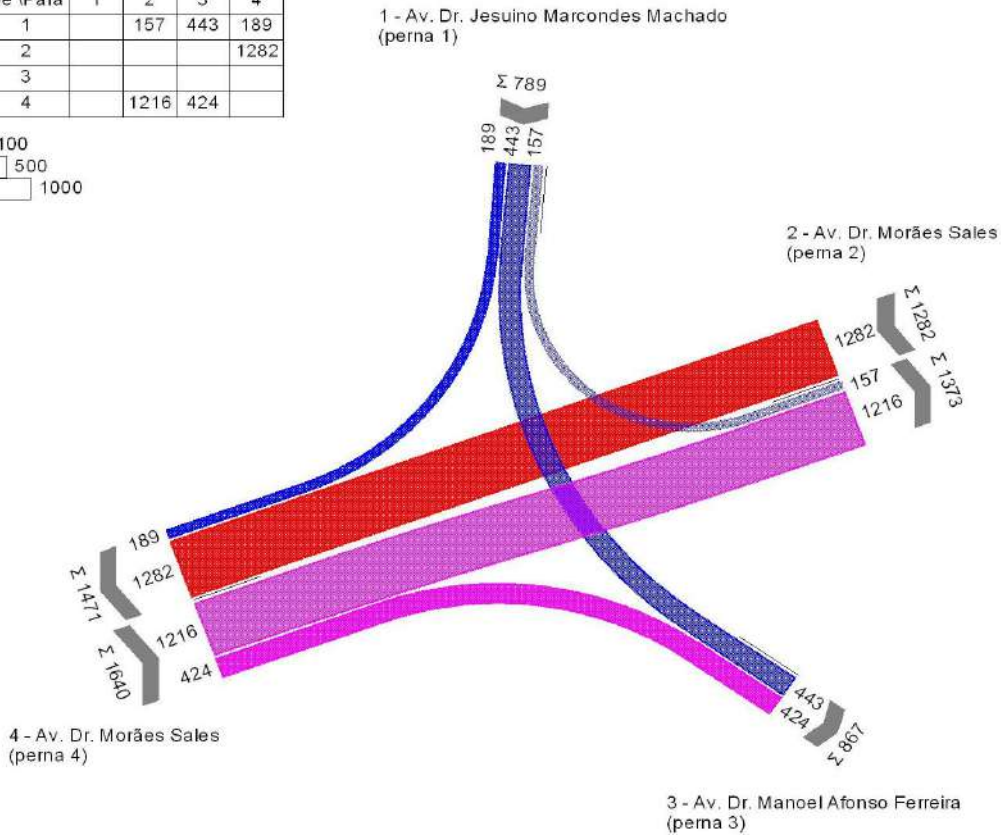
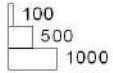


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 23.10.2019 11:00 - 23.10.2019 12:00
 3711 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 157 | 443 | 189 |
| 2 | | | | 1282 |
| 3 | | | | |
| 4 | | 1216 | 424 | |



Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 23.10.2019 12:00 - 23.10.2019 13:00
 4301 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 186 | 586 | 161 |
| 2 | | | | 1386 |
| 3 | | | | |
| 4 | | 1570 | 412 | |

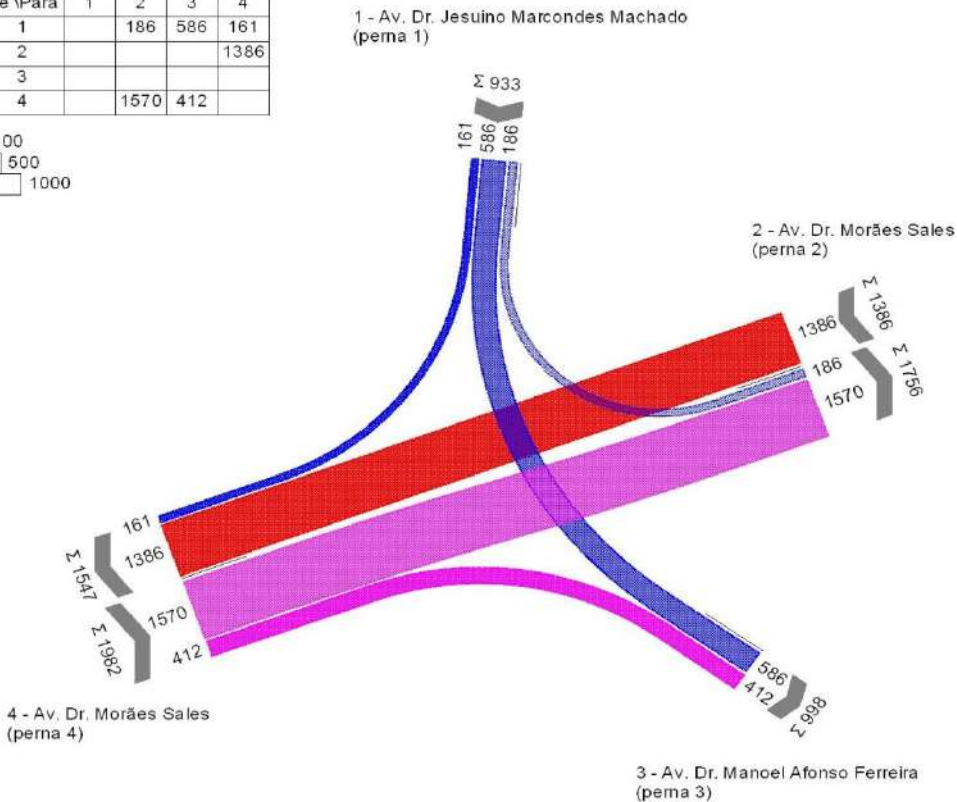
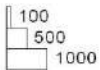


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 23.10.2019 13:00 - 23.10.2019 14:00
 4047 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 142 | 489 | 174 |
| 2 | | | | 1536 |
| 3 | | | | |
| 4 | | 1328 | 378 | |

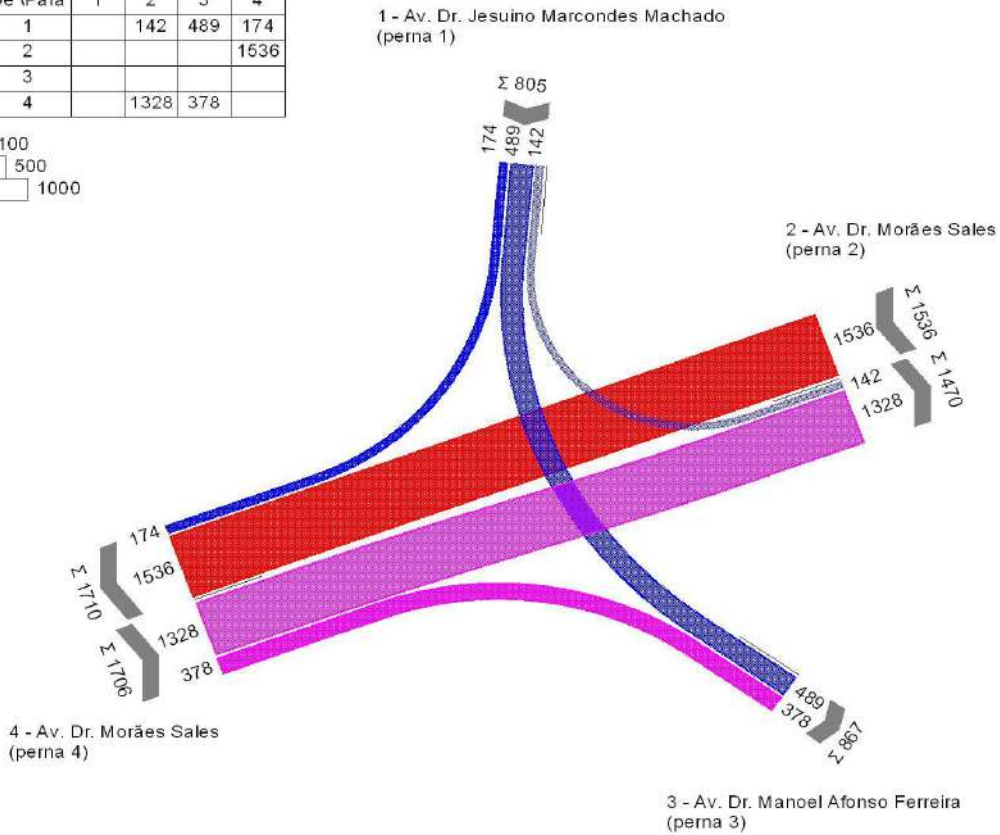
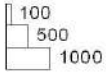
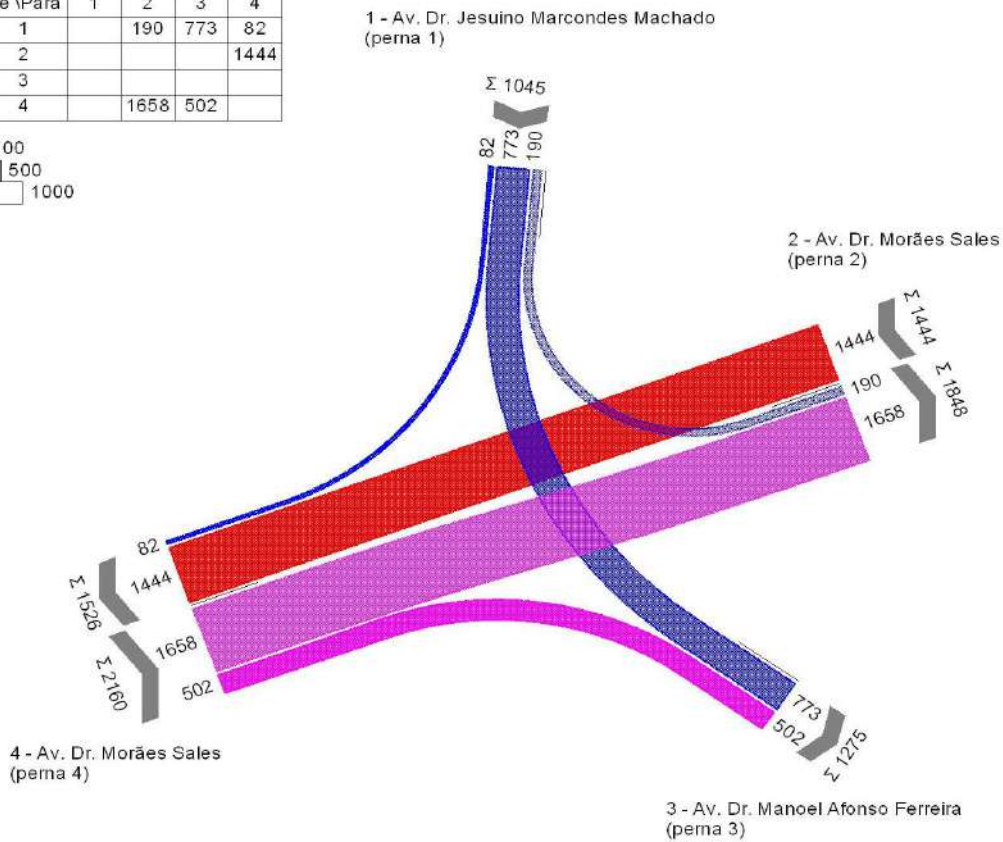
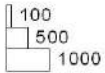


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 23.10.2019 17:00 - 23.10.2019 18:00
 4649 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 190 | 773 | 82 |
| 2 | | | | 1444 |
| 3 | | | | |
| 4 | | 1658 | 502 | |



Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 23.10.2019 18:00 - 23.10.2019 19:00
 4829 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 180 | 760 | 84 |
| 2 | | | | 1669 |
| 3 | | | | |
| 4 | | 1648 | 488 | |

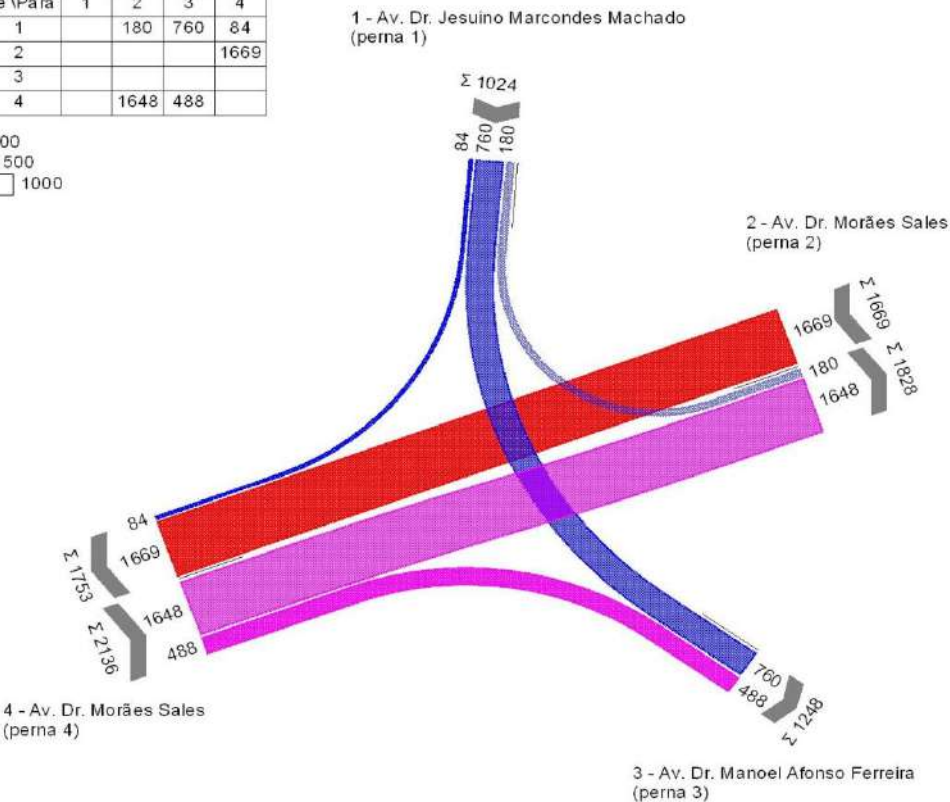
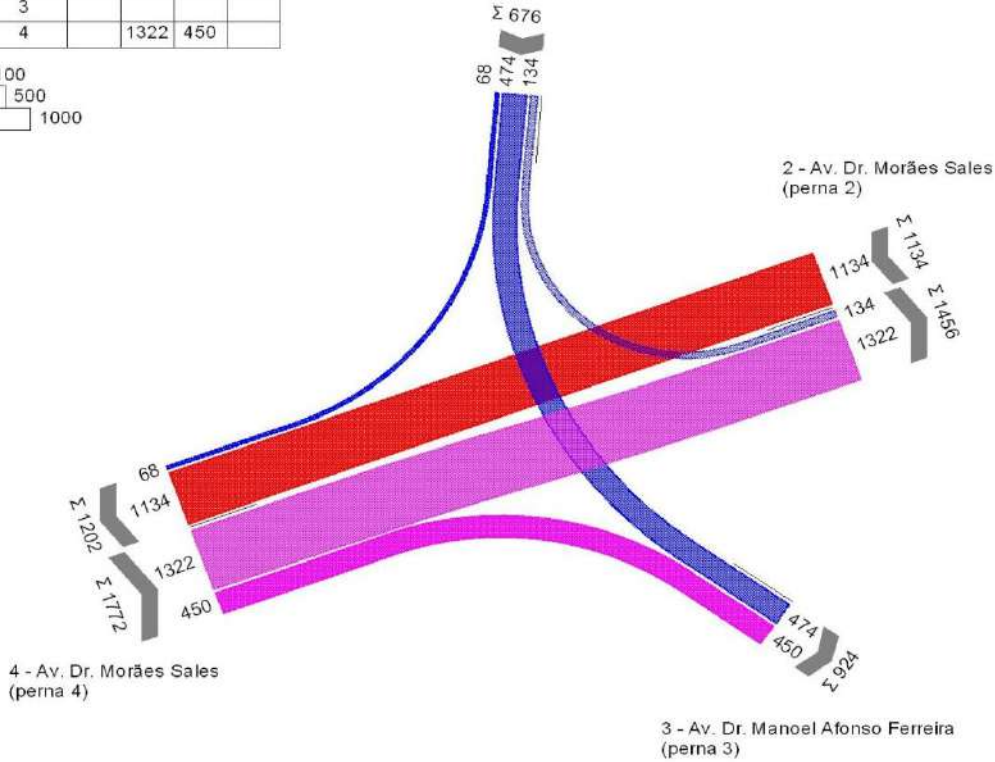
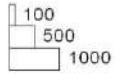


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 às 00h00 até 24-10-2019 às 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 23.10.2019 19:00 - 23.10.2019 20:00
 3582 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 134 | 474 | 68 |
| 2 | | | | 1134 |
| 3 | | | | |
| 4 | | 1322 | 450 | |

1 - Av. Dr. Jesuino Marcondes Machado (perna 1)



PCU

001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

1 > 2 Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 54 | 0 | 3 | 0 | 0 | 62 | 57 |
| 8:00 | 9:00 | 94 | 0 | 3 | 0 | 0 | 102 | 97 |
| 9:00 | 10:00 | 114 | 0 | 7 | 0 | 0 | 132 | 121 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 140 | 0 | 6 | 1 | 0 | 157 | 147 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 174 | 0 | 4 | 1 | 0 | 186 | 179 |
| 13:00 | 14:00 | 133 | 0 | 3 | 1 | 0 | 143 | 137 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 183 | 0 | 1 | 2 | 0 | 190 | 186 |
| 18:00 | 19:00 | 171 | 0 | 3 | 1 | 0 | 181 | 175 |
| 19:00 | 20:00 | 130 | 0 | 1 | 1 | 0 | 135 | 132 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 2
Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|----|----------------|-------|-----|---|-------|-----|---|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 44 | 0 | 0 | 1 | 0 | 46 | 45 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 39 | 0 | 1 | 0 | 0 | 42 | 40 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 42 | 0 | 2 | 0 | 0 | 47 | 44 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 49 | 0 | 1 | 0 | 0 | 52 | 50 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 36 | 0 | 0 | 0 | 0 | 36 | 36 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 35 | 0 | 0 | 1 | 0 | 37 | 36 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 22 | 0 | 2 | 0 | 0 | 27 | 24 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 40 | 0 | 1 | 0 | 0 | 43 | 41 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 41 | 0 | 0 | 1 | 0 | 43 | 42 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 49 | 0 | 1 | 0 | 0 | 52 | 50 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 45 | 0 | 0 | 0 | 0 | 45 | 45 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 48 | 0 | 0 | 1 | 0 | 50 | 49 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 51 | 0 | 0 | 0 | 0 | 51 | 51 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 48 | 0 | 2 | 0 | 0 | 53 | 50 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 42 | 0 | 0 | 1 | 0 | 44 | 43 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 30 | 0 | 1 | 0 | 0 | 33 | 31 | |
| 7:00 | 7:15 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 9 | 19:00 | 19:15 | 37 | 0 | 0 | 1 | 0 | 39 | 38 | |
| 7:15 | 7:30 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 12 | 19:15 | 19:30 | 33 | 0 | 0 | 0 | 0 | 33 | 33 | |
| 7:30 | 7:45 | 15 | 0 | 2 | 0 | 0 | 20 | 17 | 17 | 19:30 | 19:45 | 31 | 0 | 1 | 0 | 0 | 34 | 32 | |
| 7:45 | 8:00 | 18 | 0 | 1 | 0 | 0 | 21 | 19 | 19 | 19:45 | 20:00 | 29 | 0 | 0 | 0 | 0 | 29 | 29 | |
| 8:00 | 8:15 | 17 | 0 | 0 | 0 | 0 | 17 | 17 | 17 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 25 | 0 | 2 | 0 | 0 | 30 | 27 | 27 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 29 | 0 | 0 | 0 | 0 | 29 | 29 | 29 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 23 | 0 | 1 | 0 | 0 | 26 | 24 | 24 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 31 | 0 | 1 | 0 | 0 | 34 | 32 | 32 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 22 | 0 | 3 | 0 | 0 | 30 | 25 | 25 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 30 | 0 | 2 | 0 | 0 | 35 | 32 | 32 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 31 | 0 | 1 | 0 | 0 | 34 | 32 | 32 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 35 | 0 | 1 | 1 | 0 | 40 | 37 | 37 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 32 | 0 | 3 | 0 | 0 | 40 | 35 | 35 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 31 | 0 | 1 | 0 | 0 | 34 | 32 | 32 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 42 | 0 | 1 | 0 | 0 | 45 | 43 | 43 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

1 > 3 Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 452 | 0 | 4 | 1 | 0 | 464 | 457 |
| 8:00 | 9:00 | 463 | 0 | 4 | 3 | 0 | 479 | 470 |
| 9:00 | 10:00 | 430 | 0 | 11 | 1 | 0 | 460 | 442 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 431 | 0 | 4 | 1 | 0 | 443 | 436 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 569 | 0 | 5 | 2 | 0 | 586 | 576 |
| 13:00 | 14:00 | 473 | 0 | 4 | 3 | 0 | 489 | 480 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 754 | 0 | 6 | 2 | 0 | 773 | 762 |
| 18:00 | 19:00 | 737 | 0 | 6 | 4 | 0 | 760 | 747 |
| 19:00 | 20:00 | 464 | 0 | 3 | 1 | 0 | 474 | 468 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 3
Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | | Car | - | Truck | Bus | - | PCU | VEC | Período de | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 145 | 0 | 2 | 0 | 0 | 150 | 147 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 166 | 0 | 1 | 1 | 0 | 171 | 168 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 132 | 0 | 1 | 0 | 0 | 135 | 133 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 126 | 0 | 1 | 1 | 0 | 131 | 128 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 118 | 0 | 0 | 0 | 0 | 118 | 118 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 116 | 0 | 1 | 0 | 0 | 119 | 117 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 120 | 0 | 1 | 1 | 0 | 125 | 122 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 119 | 0 | 2 | 2 | 0 | 128 | 123 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 183 | 0 | 0 | 0 | 0 | 183 | 183 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 169 | 0 | 2 | 1 | 0 | 176 | 172 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 198 | 0 | 1 | 1 | 0 | 203 | 200 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 204 | 0 | 3 | 0 | 0 | 212 | 207 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 189 | 0 | 2 | 0 | 0 | 194 | 191 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 181 | 0 | 3 | 2 | 0 | 193 | 186 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 185 | 0 | 0 | 1 | 0 | 187 | 186 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 182 | 0 | 1 | 1 | 0 | 187 | 184 |
| 7:00 | 7:15 | 90 | 0 | 1 | 0 | 0 | 93 | 91 | 19:00 | 19:15 | 156 | 0 | 1 | 0 | 0 | 159 | 157 |
| 7:15 | 7:30 | 158 | 0 | 1 | 1 | 0 | 163 | 160 | 19:15 | 19:30 | 128 | 0 | 1 | 0 | 0 | 131 | 129 |
| 7:30 | 7:45 | 87 | 0 | 1 | 0 | 0 | 90 | 88 | 19:30 | 19:45 | 102 | 0 | 1 | 1 | 0 | 107 | 104 |
| 7:45 | 8:00 | 117 | 0 | 1 | 0 | 0 | 120 | 118 | 19:45 | 20:00 | 78 | 0 | 0 | 0 | 0 | 78 | 78 |
| 8:00 | 8:15 | 112 | 0 | 0 | 1 | 0 | 114 | 113 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 117 | 0 | 2 | 1 | 0 | 124 | 120 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 107 | 0 | 1 | 1 | 0 | 112 | 109 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 127 | 0 | 1 | 0 | 0 | 130 | 128 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 115 | 0 | 1 | 0 | 0 | 118 | 116 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 107 | 0 | 2 | 1 | 0 | 114 | 110 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 105 | 0 | 3 | 0 | 0 | 113 | 108 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 103 | 0 | 5 | 0 | 0 | 116 | 108 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 107 | 0 | 1 | 0 | 0 | 110 | 108 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 101 | 0 | 2 | 1 | 0 | 108 | 104 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 113 | 0 | 0 | 0 | 0 | 113 | 113 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 110 | 0 | 1 | 0 | 0 | 113 | 111 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 96 | 0 | 0 | 1 | 0 | 98 | 97 |
| 8:00 | 9:00 | 159 | 0 | 4 | 1 | 0 | 171 | 164 |
| 9:00 | 10:00 | 140 | 0 | 6 | 2 | 0 | 159 | 148 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 175 | 0 | 4 | 2 | 0 | 189 | 181 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 151 | 0 | 4 | 0 | 0 | 161 | 155 |
| 13:00 | 14:00 | 158 | 0 | 5 | 2 | 0 | 175 | 165 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 78 | 0 | 1 | 1 | 0 | 83 | 80 |
| 18:00 | 19:00 | 74 | 0 | 4 | 0 | 0 | 84 | 78 |
| 19:00 | 20:00 | 68 | 0 | 0 | 0 | 0 | 68 | 68 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 4
Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 44 | 0 | 2 | 0 | 0 | 49 | | 46 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 36 | 0 | 0 | 0 | 0 | 36 | 161 | 36 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 34 | 0 | 1 | 0 | 0 | 37 | | 35 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 37 | 0 | 1 | 0 | 0 | 40 | | 38 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 41 | 0 | 2 | 0 | 0 | 46 | | 43 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 35 | 0 | 1 | 1 | 0 | 40 | 175 | 37 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 42 | 0 | 0 | 0 | 0 | 42 | | 42 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 40 | 0 | 2 | 1 | 0 | 47 | | 43 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 23 | 0 | 0 | 1 | 0 | 25 | 83 | 24 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 19 | 0 | 0 | 0 | 0 | 19 | | 19 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 21 | 0 | 0 | 0 | 0 | 21 | | 21 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 15 | 0 | 1 | 0 | 0 | 18 | | 16 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 17 | 0 | 1 | 0 | 0 | 20 | | 18 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 14 | 0 | 2 | 0 | 0 | 19 | 84 | 16 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 11 | 0 | 0 | 0 | 0 | 11 | | 11 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 32 | 0 | 1 | 0 | 0 | 35 | | 33 |
| 7:00 | 7:15 | 19 | 0 | 0 | 0 | 0 | 19 | | 19 | 19:00 | 19:15 | 24 | 0 | 0 | 0 | 0 | 24 | | 24 |
| 7:15 | 7:30 | 25 | 0 | 0 | 0 | 0 | 25 | 98 | 25 | 19:15 | 19:30 | 15 | 0 | 0 | 0 | 0 | 15 | 68 | 15 |
| 7:30 | 7:45 | 23 | 0 | 0 | 1 | 0 | 25 | | 24 | 19:30 | 19:45 | 13 | 0 | 0 | 0 | 0 | 13 | | 13 |
| 7:45 | 8:00 | 29 | 0 | 0 | 0 | 0 | 29 | | 29 | 19:45 | 20:00 | 16 | 0 | 0 | 0 | 0 | 16 | | 16 |
| 8:00 | 8:15 | 32 | 0 | 2 | 0 | 0 | 37 | | 34 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:15 | 8:30 | 39 | 0 | 0 | 1 | 0 | 41 | 171 | 40 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 40 | 0 | 1 | 0 | 0 | 43 | | 41 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 48 | 0 | 1 | 0 | 0 | 51 | | 49 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 35 | 0 | 0 | 0 | 0 | 35 | | 35 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:15 | 9:30 | 34 | 0 | 2 | 1 | 0 | 41 | 159 | 37 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 38 | 0 | 2 | 1 | 0 | 45 | | 41 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 33 | 0 | 2 | 0 | 0 | 38 | | 35 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 50 | 0 | 2 | 0 | 0 | 55 | 189 | 52 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:15 | 11:30 | 37 | 0 | 1 | 1 | 0 | 42 | | 39 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 45 | 0 | 0 | 0 | 0 | 45 | | 45 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 43 | 0 | 1 | 1 | 0 | 48 | | 45 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

2 > 4 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1817 | 0 | 20 | 48 | 0 | 1963 | 1885 |
| 8:00 | 9:00 | 1649 | 0 | 26 | 45 | 0 | 1804 | 1720 |
| 9:00 | 10:00 | 1398 | 0 | 44 | 29 | 0 | 1566 | 1471 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1160 | 0 | 31 | 22 | 0 | 1282 | 1213 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1272 | 0 | 33 | 16 | 0 | 1387 | 1321 |
| 13:00 | 14:00 | 1392 | 0 | 37 | 26 | 0 | 1537 | 1455 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1339 | 0 | 7 | 44 | 0 | 1445 | 1390 |
| 18:00 | 19:00 | 1549 | 0 | 8 | 50 | 0 | 1669 | 1607 |
| 19:00 | 20:00 | 1050 | 0 | 9 | 31 | 0 | 1135 | 1090 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
2 > 4 Av. Dr. Morães Sales em frente

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|------|-----|---------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de | | Car | - | Truck | Bus | - | PCU | VEC | | Período de | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 317 | 0 | 11 | 3 | 0 | 351 | | 331 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 307 | 0 | 9 | 4 | 0 | 338 | 1387 | 320 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 332 | 0 | 7 | 5 | 0 | 360 | | 344 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 316 | 0 | 6 | 4 | 0 | 339 | | 326 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 347 | 0 | 9 | 9 | 0 | 388 | 1537 | 365 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 359 | 0 | 12 | 8 | 0 | 405 | | 379 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 341 | 0 | 7 | 5 | 0 | 369 | | 353 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 345 | 0 | 9 | 4 | 0 | 376 | | 358 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 310 | 0 | 1 | 5 | 0 | 323 | 1445 | 316 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 369 | 0 | 1 | 15 | 0 | 402 | | 385 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 335 | 0 | 2 | 13 | 0 | 366 | | 350 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 325 | 0 | 3 | 11 | 0 | 355 | | 339 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 342 | 0 | 1 | 10 | 0 | 365 | 1669 | 353 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 352 | 0 | 2 | 9 | 0 | 375 | | 363 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 312 | 0 | 3 | 12 | 0 | 344 | | 327 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 543 | 0 | 2 | 19 | 0 | 586 | | 564 |
| 7:00 | 7:15 | 389 | 0 | 2 | 11 | 0 | 416 | | 402 | 19:00 | 19:15 | 302 | 0 | 0 | 11 | 0 | 324 | 1135 | 313 |
| 7:15 | 7:30 | 456 | 0 | 3 | 9 | 0 | 482 | 1963 | 468 | 19:15 | 19:30 | 278 | 0 | 2 | 7 | 0 | 297 | | 287 |
| 7:30 | 7:45 | 540 | 0 | 4 | 13 | 0 | 576 | | 557 | 19:30 | 19:45 | 233 | 0 | 4 | 8 | 0 | 259 | | 245 |
| 7:45 | 8:00 | 432 | 0 | 11 | 15 | 0 | 490 | | 458 | 19:45 | 20:00 | 237 | 0 | 3 | 5 | 0 | 255 | | 245 |
| 8:00 | 8:15 | 437 | 0 | 9 | 13 | 0 | 486 | | 459 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 421 | 0 | 5 | 9 | 0 | 452 | 1804 | 435 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 380 | 0 | 7 | 11 | 0 | 420 | | 398 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 411 | 0 | 5 | 12 | 0 | 448 | | 428 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 379 | 0 | 9 | 9 | 0 | 420 | | 397 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 351 | 0 | 11 | 5 | 0 | 389 | 1566 | 367 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 345 | 0 | 12 | 8 | 0 | 391 | | 365 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 323 | 0 | 12 | 7 | 0 | 367 | | 342 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 312 | 0 | 11 | 5 | 0 | 350 | | 328 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 267 | 0 | 7 | 4 | 0 | 293 | 1282 | 278 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 282 | 0 | 6 | 6 | 0 | 309 | | 294 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 299 | 0 | 7 | 7 | 0 | 331 | | 313 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

4 > 2 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1534 | 0 | 35 | 56 | 0 | 1734 | 1625 |
| 8:00 | 9:00 | 1320 | 0 | 46 | 47 | 0 | 1529 | 1413 |
| 9:00 | 10:00 | 1140 | 0 | 39 | 29 | 0 | 1296 | 1208 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1095 | 0 | 31 | 22 | 0 | 1217 | 1148 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1463 | 0 | 27 | 20 | 0 | 1571 | 1510 |
| 13:00 | 14:00 | 1228 | 0 | 23 | 21 | 0 | 1328 | 1272 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1543 | 0 | 14 | 40 | 0 | 1658 | 1597 |
| 18:00 | 19:00 | 1538 | 0 | 7 | 46 | 0 | 1648 | 1591 |
| 19:00 | 20:00 | 1208 | 0 | 15 | 38 | 0 | 1322 | 1261 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
4 > 2
Av. Dr. Morães Sales em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|------|-----|----------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 342 | 0 | 7 | 4 | 0 | 368 | | 353 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 368 | 0 | 5 | 5 | 0 | 391 | 1571 | 378 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 341 | 0 | 8 | 6 | 0 | 373 | | 355 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 412 | 0 | 7 | 5 | 0 | 440 | | 424 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 314 | 0 | 7 | 5 | 0 | 342 | 1328 | 326 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 332 | 0 | 5 | 4 | 0 | 353 | | 341 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 280 | 0 | 6 | 5 | 0 | 305 | | 291 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 302 | 0 | 5 | 7 | 0 | 329 | | 314 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 368 | 0 | 2 | 8 | 0 | 389 | 1658 | 378 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 434 | 0 | 3 | 9 | 0 | 460 | | 446 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 361 | 0 | 5 | 11 | 0 | 396 | | 377 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 380 | 0 | 4 | 12 | 0 | 414 | | 396 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 401 | 0 | 3 | 10 | 0 | 429 | 1648 | 414 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 390 | 0 | 1 | 12 | 0 | 417 | | 403 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 386 | 0 | 2 | 11 | 0 | 413 | | 399 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 361 | 0 | 1 | 13 | 0 | 390 | | 375 |
| 7:00 | 7:15 | 358 | 0 | 5 | 12 | 0 | 395 | | 375 | 19:00 | 19:15 | 326 | 0 | 3 | 11 | 0 | 356 | 1322 | 340 |
| 7:15 | 7:30 | 362 | 0 | 9 | 15 | 0 | 415 | 1734 | 386 | 19:15 | 19:30 | 341 | 0 | 2 | 9 | 0 | 364 | | 352 |
| 7:30 | 7:45 | 413 | 0 | 11 | 17 | 0 | 475 | | 441 | 19:30 | 19:45 | 275 | 0 | 6 | 11 | 0 | 312 | | 292 |
| 7:45 | 8:00 | 401 | 0 | 10 | 12 | 0 | 450 | | 423 | 19:45 | 20:00 | 266 | 0 | 4 | 7 | 0 | 290 | | 277 |
| 8:00 | 8:15 | 376 | 0 | 12 | 11 | 0 | 428 | | 399 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 324 | 0 | 7 | 15 | 0 | 372 | 1529 | 346 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 309 | 0 | 11 | 13 | 0 | 363 | | 333 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 311 | 0 | 16 | 8 | 0 | 367 | | 335 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 315 | 0 | 13 | 13 | 0 | 374 | | 341 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 267 | 0 | 11 | 6 | 0 | 307 | 1296 | 284 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 280 | 0 | 8 | 7 | 0 | 314 | | 295 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 278 | 0 | 7 | 3 | 0 | 302 | | 288 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 295 | 0 | 9 | 4 | 0 | 326 | | 308 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 261 | 0 | 6 | 5 | 0 | 286 | 1217 | 272 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 259 | 0 | 9 | 6 | 0 | 294 | | 274 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 280 | 0 | 7 | 7 | 0 | 312 | | 294 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

4 > 3 Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 328 | 0 | 5 | 4 | 0 | 349 | 337 |
| 8:00 | 9:00 | 370 | 0 | 1 | 0 | 0 | 373 | 371 |
| 9:00 | 10:00 | 404 | 0 | 6 | 0 | 0 | 419 | 410 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 412 | 0 | 5 | 0 | 0 | 425 | 417 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 404 | 0 | 3 | 0 | 0 | 412 | 407 |
| 13:00 | 14:00 | 370 | 0 | 3 | 0 | 0 | 378 | 373 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 493 | 0 | 1 | 3 | 0 | 502 | 497 |
| 18:00 | 19:00 | 467 | 0 | 3 | 7 | 0 | 489 | 477 |
| 19:00 | 20:00 | 433 | 0 | 3 | 5 | 0 | 451 | 441 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
4 > 3
Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de | | Car | - | Truck | Bus | - | PCU | | VEC | Período de | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 98 | 0 | 2 | 0 | 0 | 103 | 100 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 102 | 0 | 0 | 0 | 0 | 102 | 102 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 104 | 0 | 1 | 0 | 0 | 107 | 105 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 98 | 0 | 1 | 0 | 0 | 101 | 99 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 89 | 0 | 0 | 0 | 0 | 89 | 89 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 90 | 0 | 1 | 0 | 0 | 93 | 91 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 93 | 0 | 1 | 0 | 0 | 96 | 94 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 129 | 0 | 0 | 1 | 0 | 131 | 130 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 123 | 0 | 0 | 1 | 0 | 125 | 124 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 121 | 0 | 1 | 0 | 0 | 124 | 122 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 120 | 0 | 0 | 1 | 0 | 122 | 121 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 116 | 0 | 0 | 1 | 0 | 118 | 117 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 110 | 0 | 2 | 3 | 0 | 121 | 115 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 119 | 0 | 1 | 2 | 0 | 126 | 122 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 122 | 0 | 0 | 1 | 0 | 124 | 123 | |
| 7:00 | 7:15 | 101 | 0 | 2 | 1 | 0 | 108 | 104 | 104 | 19:00 | 19:15 | 121 | 0 | 0 | 1 | 0 | 123 | 122 | |
| 7:15 | 7:30 | 78 | 0 | 2 | 1 | 0 | 85 | 81 | 81 | 19:15 | 19:30 | 119 | 0 | 1 | 2 | 0 | 126 | 122 | |
| 7:30 | 7:45 | 76 | 0 | 0 | 1 | 0 | 78 | 77 | 77 | 19:30 | 19:45 | 102 | 0 | 1 | 0 | 0 | 105 | 103 | |
| 7:45 | 8:00 | 73 | 0 | 1 | 1 | 0 | 78 | 75 | 75 | 19:45 | 20:00 | 91 | 0 | 1 | 2 | 0 | 98 | 94 | |
| 8:00 | 8:15 | 93 | 0 | 1 | 0 | 0 | 96 | 94 | 94 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 89 | 0 | 0 | 0 | 0 | 89 | 89 | 89 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 100 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 88 | 0 | 0 | 0 | 0 | 88 | 88 | 88 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 95 | 0 | 1 | 0 | 0 | 98 | 96 | 96 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 106 | 0 | 2 | 0 | 0 | 111 | 108 | 108 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 100 | 0 | 1 | 0 | 0 | 103 | 101 | 101 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 103 | 0 | 2 | 0 | 0 | 108 | 105 | 105 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 101 | 0 | 1 | 0 | 0 | 104 | 102 | 102 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 97 | 0 | 2 | 0 | 0 | 102 | 99 | 99 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 105 | 0 | 0 | 0 | 0 | 105 | 105 | 105 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 109 | 0 | 2 | 0 | 0 | 114 | 111 | 111 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

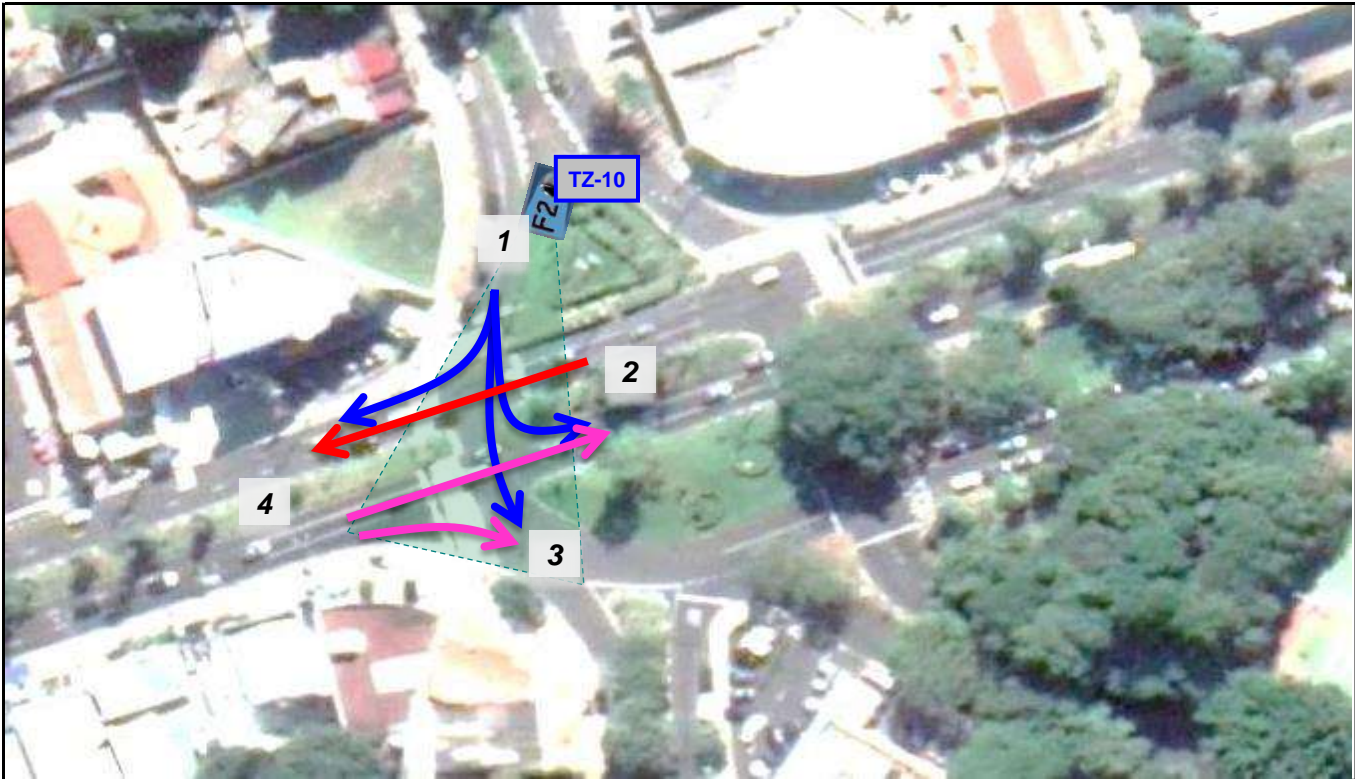
001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado

Ref.: RT-AAP.001-3J21-001_20191024_A

Campinas - SP

Novembro de 2019

Croquis **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019**



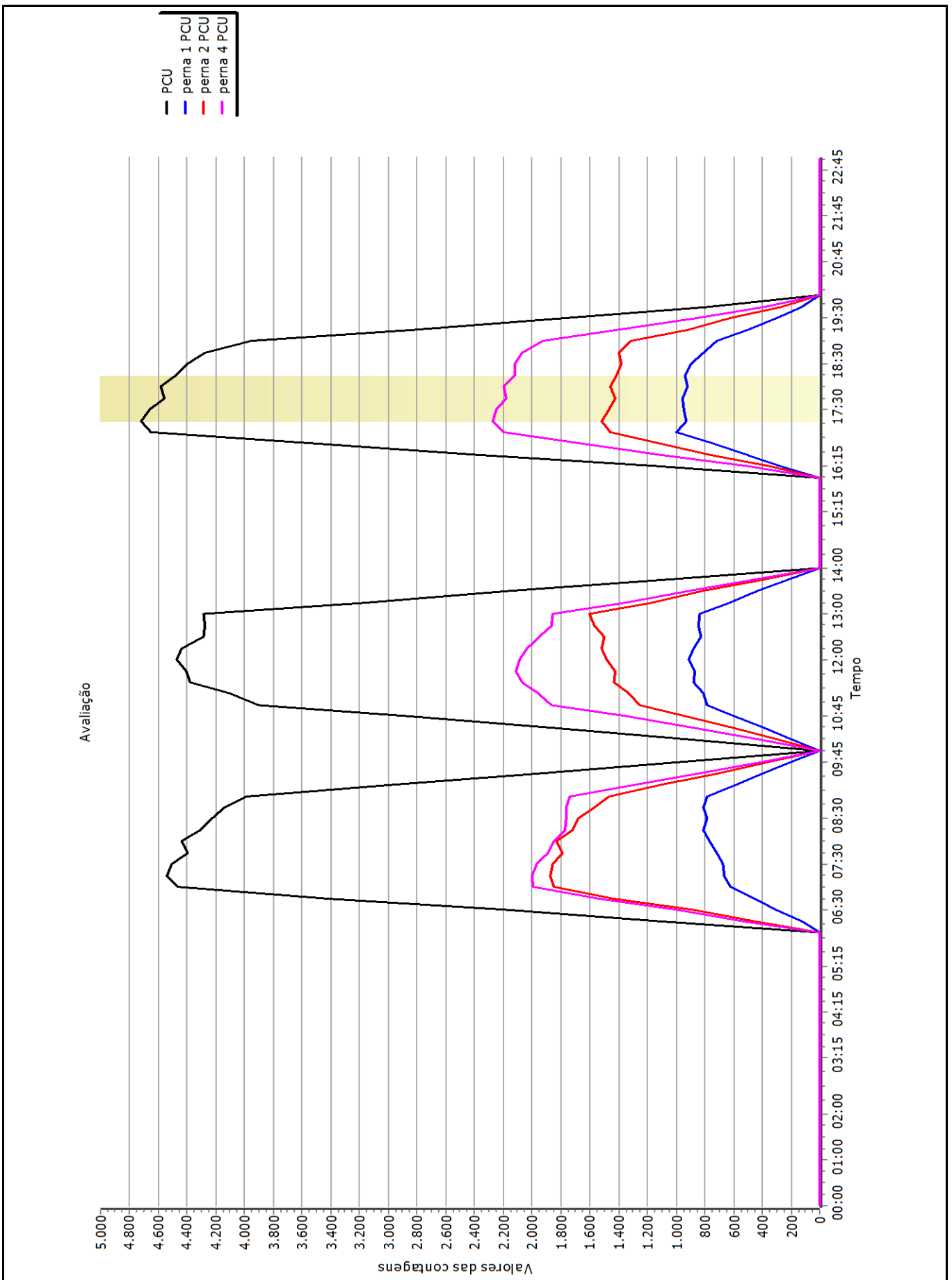
Vídeos



Movimentos Contados

- 1 > 2 Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales
- 1 > 3 Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira
- 1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales
- 2 > 4 Av. Dr. Morães Sales em frente
- 4 > 2 Av. Dr. Morães Sales em frente
- 4 > 3 Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira

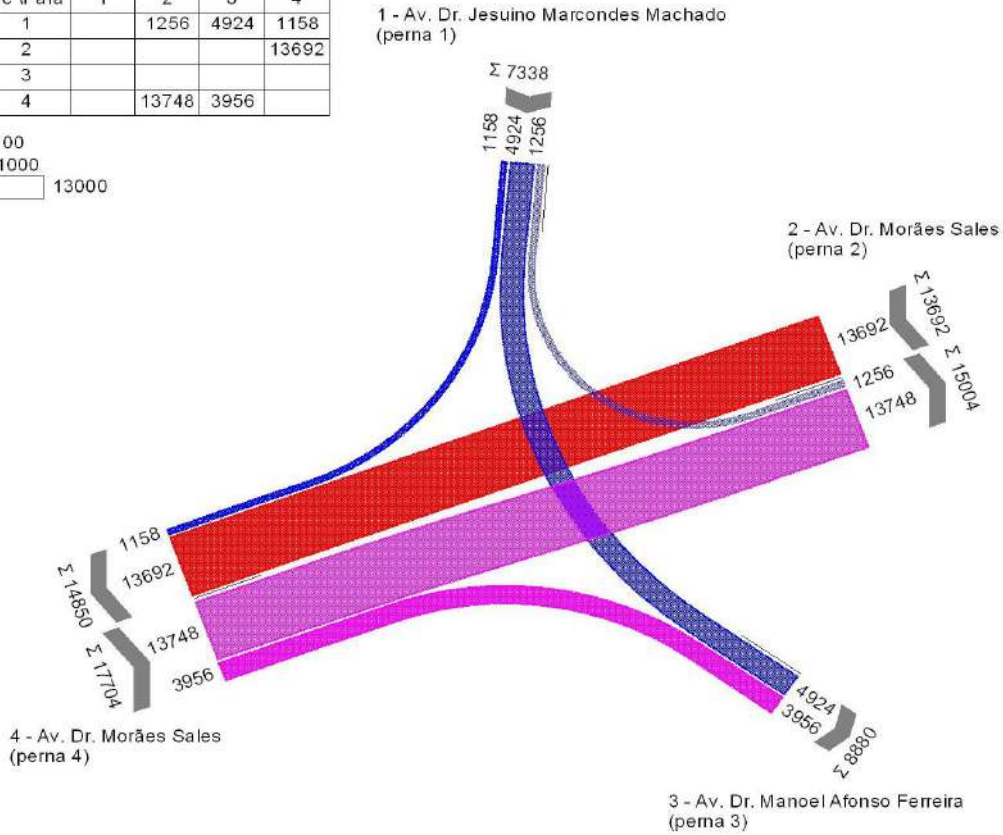
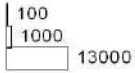
Perfil Horário 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019



Volume Total Diário

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Total On the basis of a time period 24.10.2019 00:00 - 25.10.2019 00:00
 38734 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|-------|------|-------|
| 1 | | 1256 | 4924 | 1158 |
| 2 | | | | 13692 |
| 3 | | | | |
| 4 | | 13748 | 3956 | |



Volume Hora Pico

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Hora de pico 17:15 - 18:15
 On the basis of a time period 24.10.2019 00:00 - 25.10.2019 00:00
 4718 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 167 | 676 | 83 |
| 2 | | | | 1520 |
| 3 | | | | |
| 4 | | 1780 | 492 | |

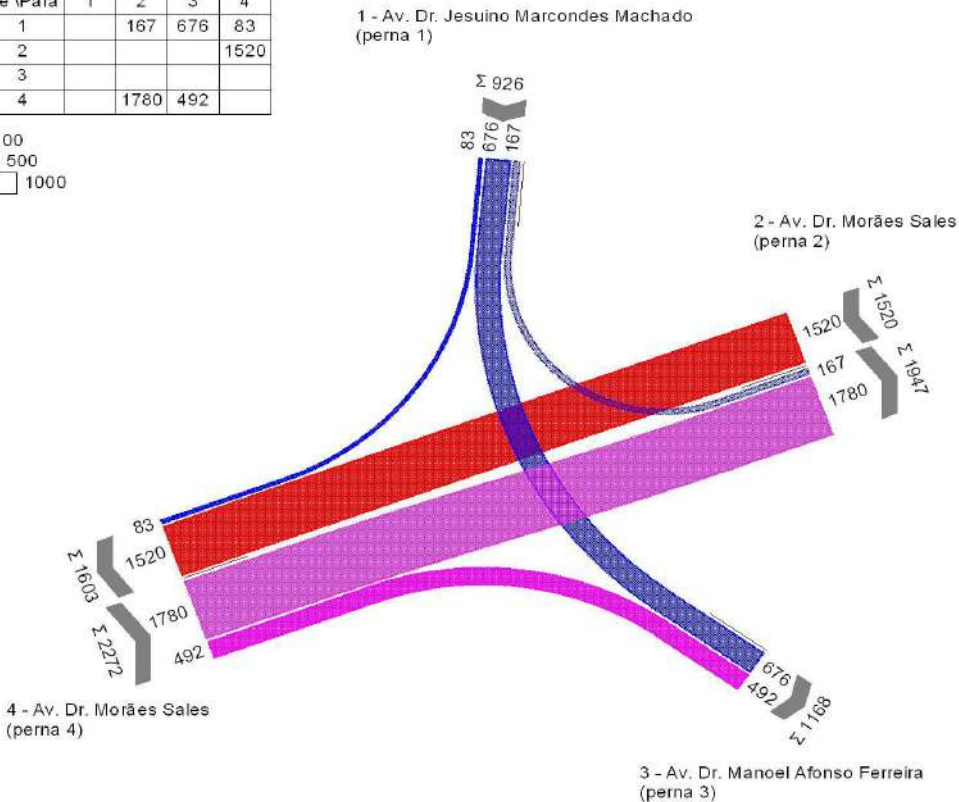
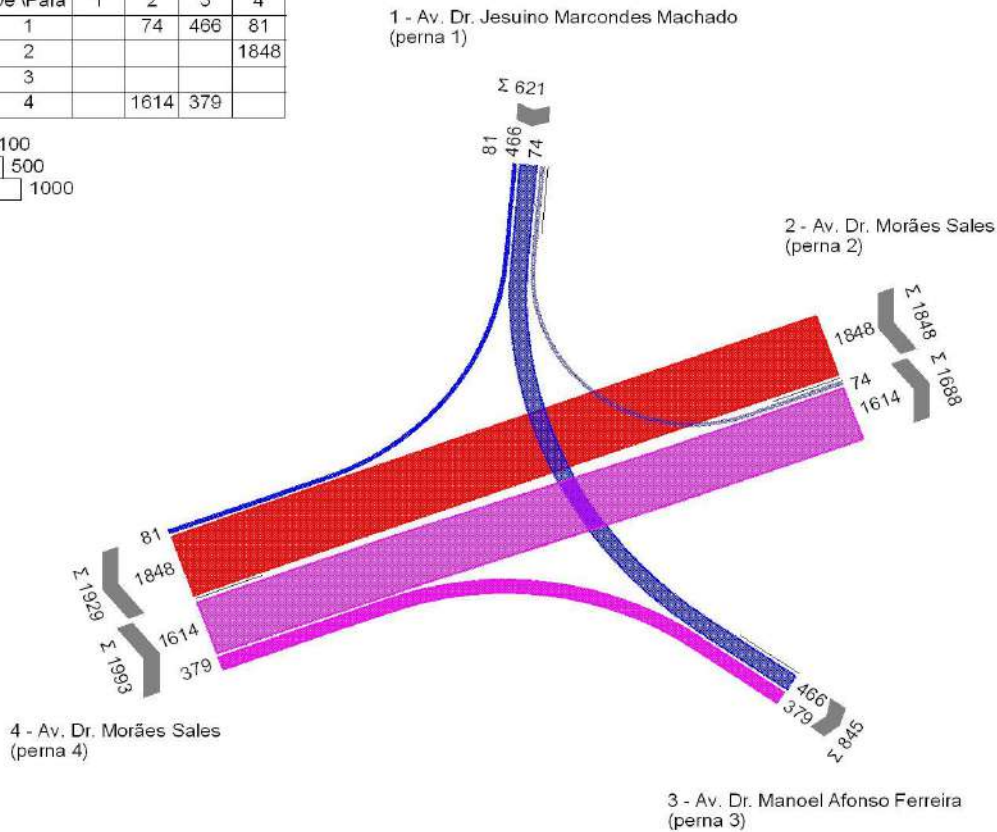
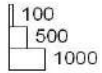


Diagrama de Fluxos **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019**

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 24.10.2019 07:00 - 24.10.2019 08:00
 4462 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 74 | 466 | 81 |
| 2 | | | | 1848 |
| 3 | | | | |
| 4 | | 1614 | 379 | |



Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 24.10.2019 08:00 - 24.10.2019 09:00
 4439 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 111 | 508 | 144 |
| 2 | | | | 1828 |
| 3 | | | | |
| 4 | | 1478 | 370 | |

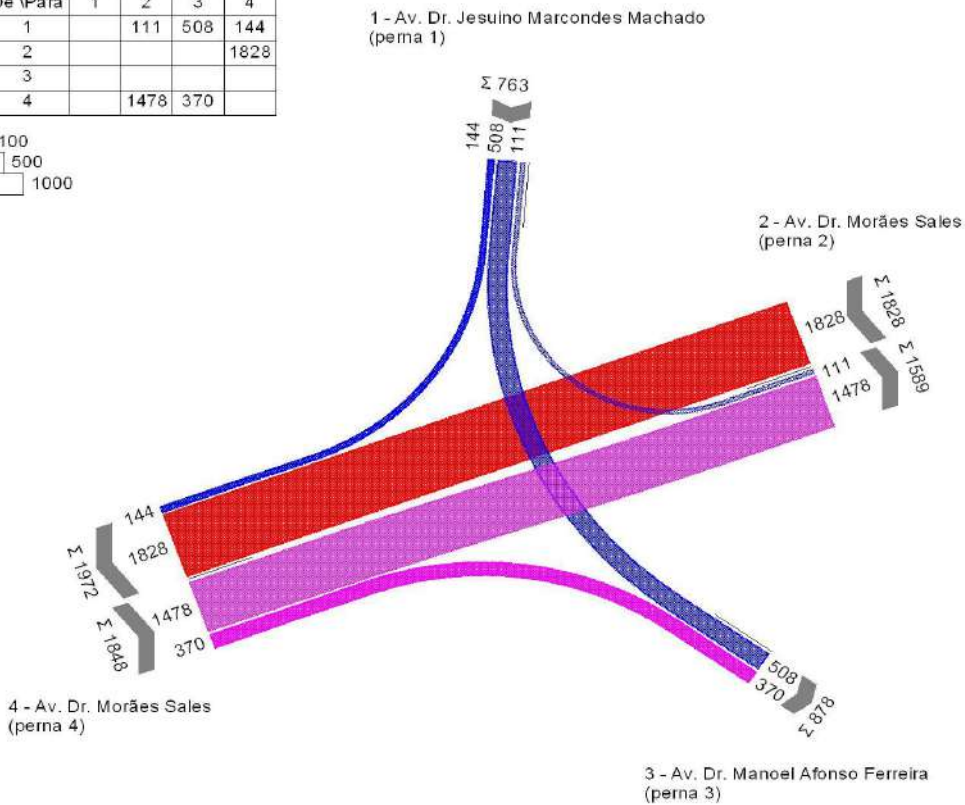
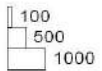


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 24.10.2019 09:00 - 24.10.2019 10:00
 3985 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 143 | 478 | 162 |
| 2 | | | | 1461 |
| 3 | | | | |
| 4 | | 1364 | 377 | |

1 - Av. Dr. Jesuino Marcondes Machado (perna 1)

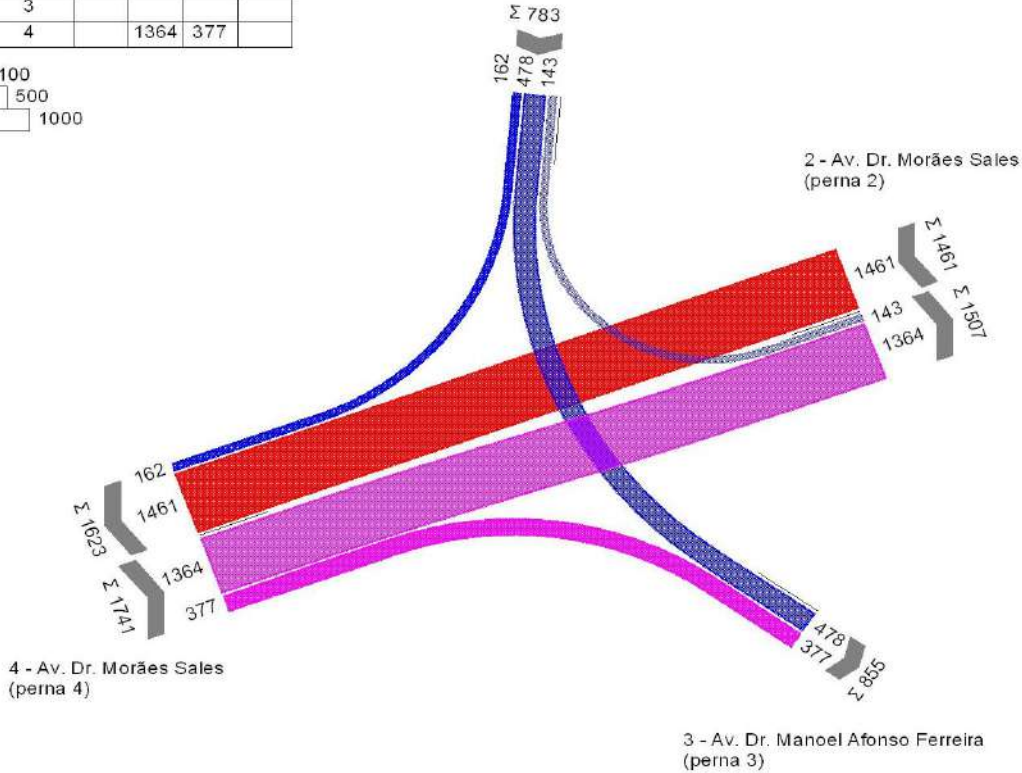
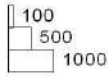
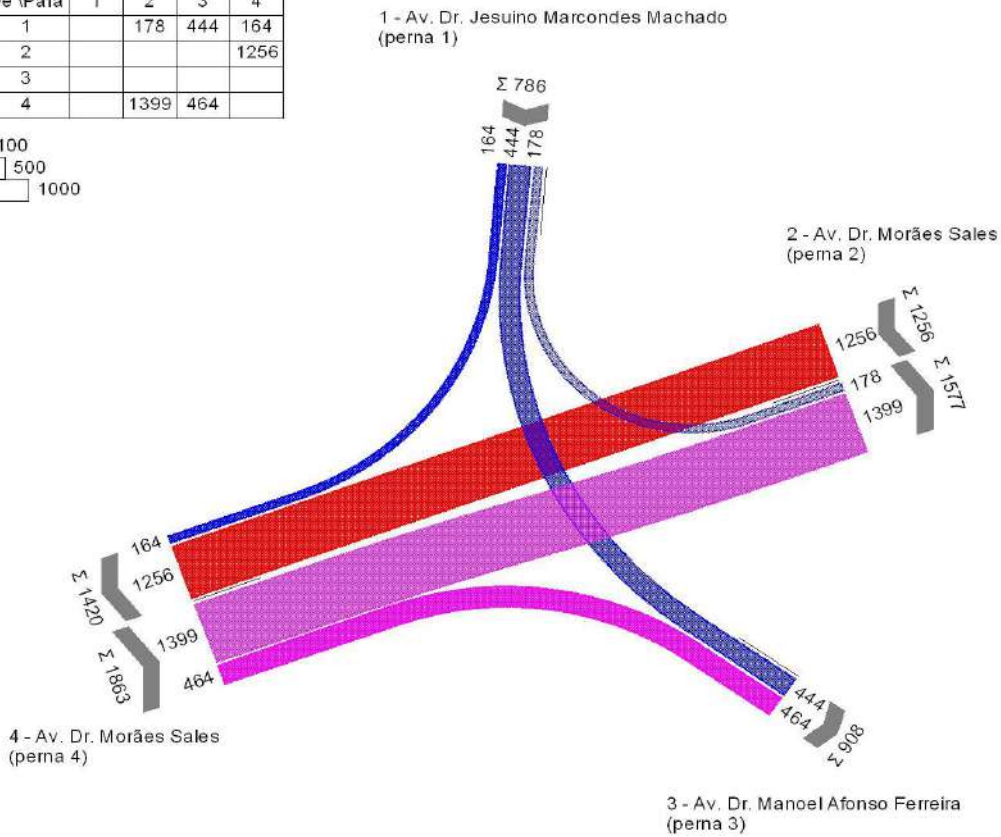
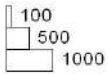


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 24.10.2019 11:00 - 24.10.2019 12:00
 3905 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 178 | 444 | 164 |
| 2 | | | | 1256 |
| 3 | | | | |
| 4 | | 1399 | 464 | |



Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 24.10.2019 12:00 - 24.10.2019 13:00
 4475 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 174 | 566 | 169 |
| 2 | | | | 1481 |
| 3 | | | | |
| 4 | | 1610 | 475 | |

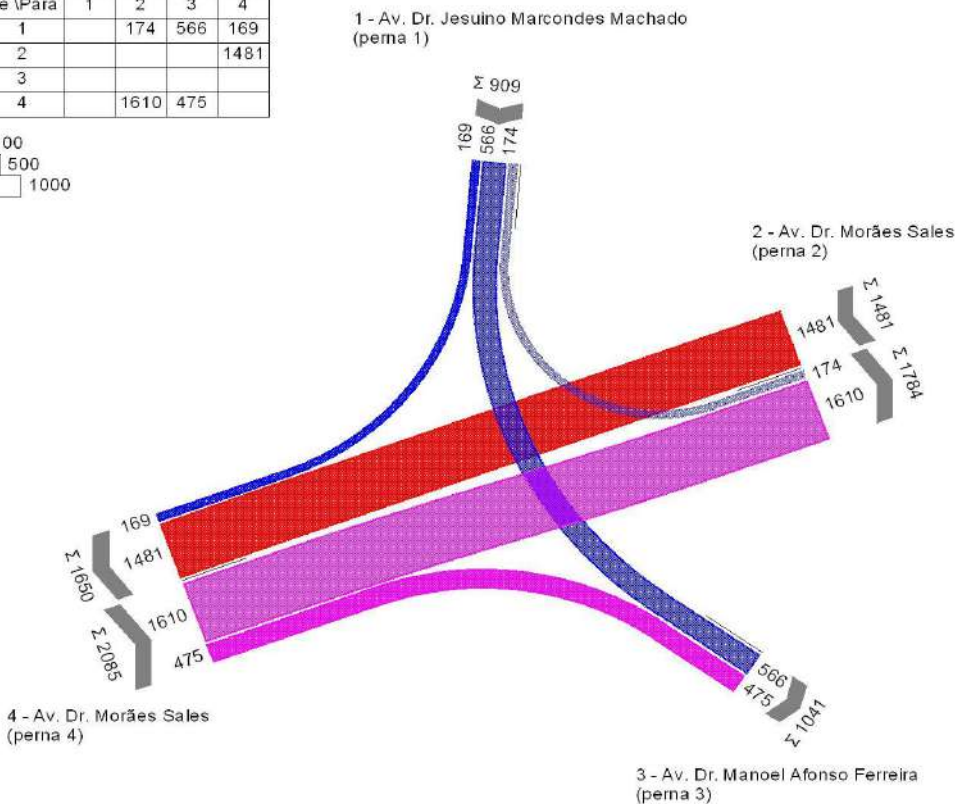


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 24.10.2019 13:00 - 24.10.2019 14:00
 4287 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 156 | 508 | 172 |
| 2 | | | | 1598 |
| 3 | | | | |
| 4 | | 1428 | 425 | |

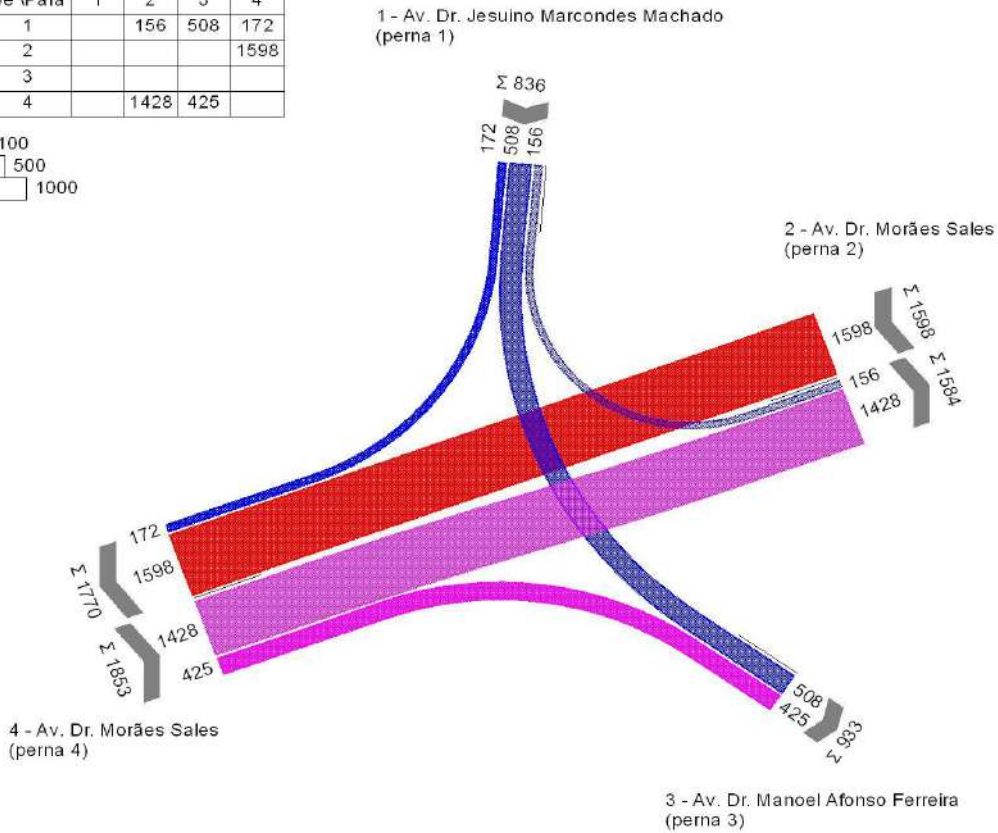
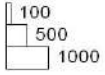
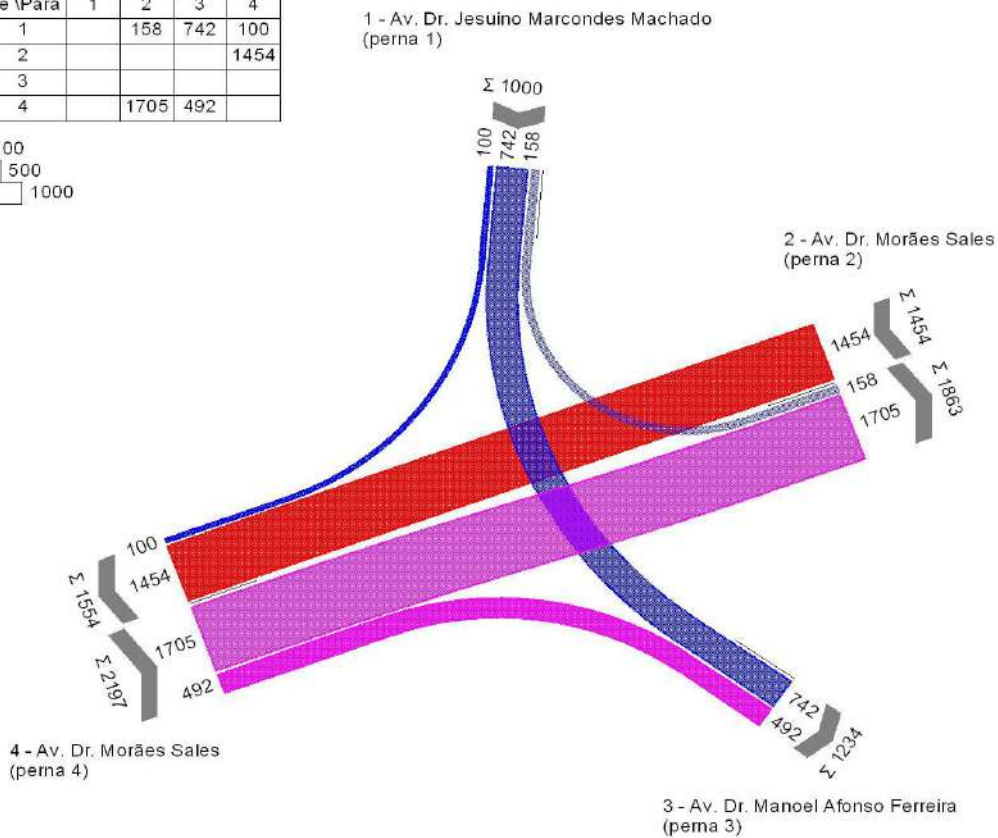
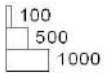


Diagrama de Fluxos 001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 24.10.2019 17:00 - 24.10.2019 18:00
 4651 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 158 | 742 | 100 |
| 2 | | | | 1454 |
| 3 | | | | |
| 4 | | 1705 | 492 | |



Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 24.10.2019 18:00 - 24.10.2019 19:00
 4580 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 152 | 700 | 70 |
| 2 | | | | 1459 |
| 3 | | | | |
| 4 | | 1717 | 482 | |

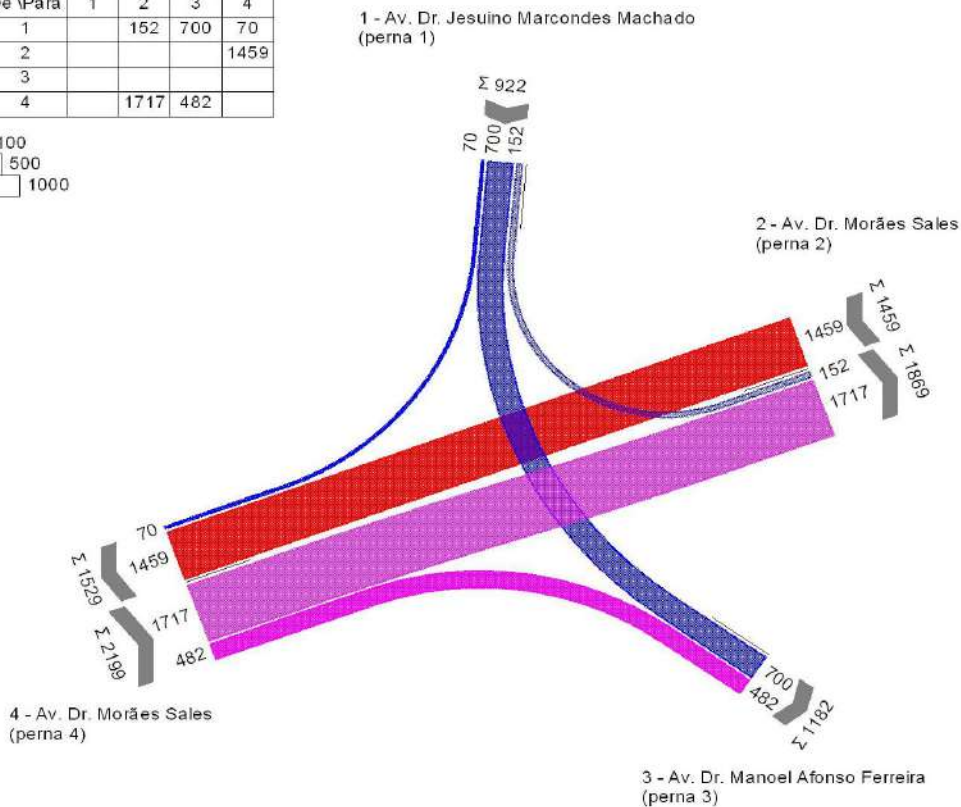
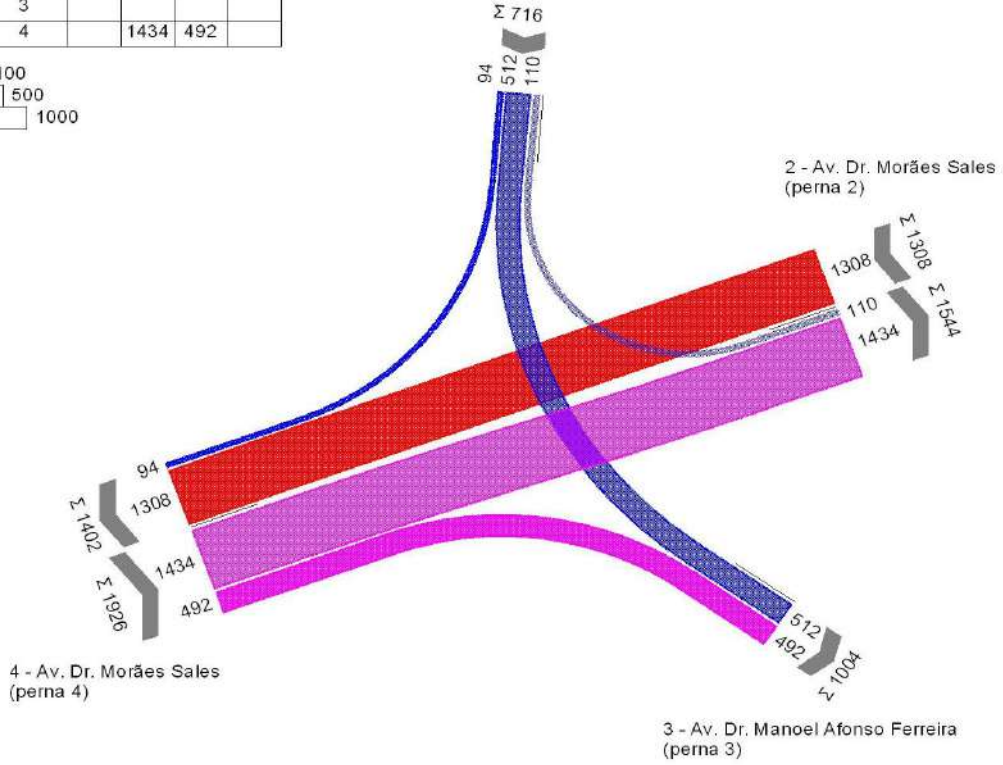
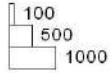


Diagrama de Fluxos **001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019**

Contagem De 24-10-2019 às 00h00 até 25-10-2019 às 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 24.10.2019 19:00 - 24.10.2019 20:00
 3950 PCU

| De \ Para | 1 | 2 | 3 | 4 |
|-----------|---|------|-----|------|
| 1 | | 110 | 512 | 94 |
| 2 | | | | 1308 |
| 3 | | | | |
| 4 | | 1434 | 492 | |

1 - Av. Dr. Jesuino Marcondes Machado (perna 1)



PCU

001 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

1 > 2 Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 69 | 0 | 2 | 0 | 0 | 74 | 71 |
| 8:00 | 9:00 | 106 | 0 | 2 | 0 | 0 | 111 | 108 |
| 9:00 | 10:00 | 118 | 0 | 10 | 0 | 0 | 143 | 128 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 168 | 0 | 4 | 0 | 0 | 178 | 172 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 172 | 0 | 1 | 0 | 0 | 175 | 173 |
| 13:00 | 14:00 | 151 | 0 | 2 | 0 | 0 | 156 | 153 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 158 | 0 | 0 | 0 | 0 | 158 | 158 |
| 18:00 | 19:00 | 152 | 0 | 0 | 0 | 0 | 152 | 152 |
| 19:00 | 20:00 | 110 | 0 | 0 | 0 | 0 | 110 | 110 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 2
Av. Dr. Jesuino Marcondes Machado conv à esq. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|----|----------------|-------|-----|---|-------|-----|---|-----|-----|--|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 38 | 0 | 0 | 0 | 0 | 38 | 38 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 48 | 0 | 0 | 0 | 0 | 48 | 48 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 41 | 0 | 1 | 0 | 0 | 44 | 42 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 45 | 0 | 0 | 0 | 0 | 45 | 45 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 42 | 0 | 0 | 0 | 0 | 42 | 42 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 31 | 0 | 0 | 0 | 0 | 31 | 31 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 40 | 0 | 1 | 0 | 0 | 43 | 41 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 38 | 0 | 1 | 0 | 0 | 41 | 39 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 34 | 0 | 0 | 0 | 0 | 34 | 34 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 54 | 0 | 0 | 0 | 0 | 54 | 54 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 34 | 0 | 0 | 0 | 0 | 34 | 34 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 36 | 0 | 0 | 0 | 0 | 36 | 36 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 43 | 0 | 0 | 0 | 0 | 43 | 43 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 34 | 0 | 0 | 0 | 0 | 34 | 34 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 36 | 0 | 0 | 0 | 0 | 36 | 36 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 39 | 0 | 0 | 0 | 0 | 39 | 39 | |
| 7:00 | 7:15 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 12 | 19:00 | 19:15 | 33 | 0 | 0 | 0 | 0 | 33 | 33 | |
| 7:15 | 7:30 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 14 | 19:15 | 19:30 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | |
| 7:30 | 7:45 | 17 | 0 | 2 | 0 | 0 | 22 | 19 | 19 | 19:30 | 19:45 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | |
| 7:45 | 8:00 | 26 | 0 | 0 | 0 | 0 | 26 | 26 | 26 | 19:45 | 20:00 | 17 | 0 | 0 | 0 | 0 | 17 | 17 | |
| 8:00 | 8:15 | 20 | 0 | 0 | 0 | 0 | 20 | 20 | 20 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 29 | 0 | 0 | 0 | 0 | 29 | 29 | 29 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 22 | 0 | 1 | 0 | 0 | 25 | 23 | 23 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 35 | 0 | 1 | 0 | 0 | 38 | 36 | 36 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 27 | 0 | 0 | 0 | 0 | 27 | 27 | 27 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 27 | 0 | 3 | 0 | 0 | 35 | 30 | 30 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 35 | 0 | 6 | 0 | 0 | 50 | 41 | 41 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 29 | 0 | 1 | 0 | 0 | 32 | 30 | 30 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 50 | 0 | 1 | 0 | 0 | 53 | 51 | 51 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 31 | 0 | 1 | 0 | 0 | 34 | 32 | 32 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 38 | 0 | 1 | 0 | 0 | 41 | 39 | 39 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 49 | 0 | 1 | 0 | 0 | 52 | 50 | 50 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

1 > 3 Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 455 | 0 | 3 | 2 | 0 | 467 | 460 |
| 8:00 | 9:00 | 478 | 0 | 11 | 1 | 0 | 508 | 490 |
| 9:00 | 10:00 | 448 | 0 | 11 | 1 | 0 | 478 | 460 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 418 | 0 | 9 | 2 | 0 | 445 | 429 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 541 | 0 | 9 | 1 | 0 | 566 | 551 |
| 13:00 | 14:00 | 481 | 0 | 10 | 1 | 0 | 508 | 492 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 729 | 0 | 2 | 4 | 0 | 742 | 735 |
| 18:00 | 19:00 | 681 | 0 | 3 | 6 | 0 | 701 | 690 |
| 19:00 | 20:00 | 504 | 0 | 0 | 4 | 0 | 512 | 508 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 3
Av. Dr. Jesuino Marcondes Machado em frente Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de | | Car | - | Truck | Bus | - | PCU | VEC | | Período de | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 133 | 0 | 4 | 0 | 0 | 143 | | 137 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 153 | 0 | 2 | 0 | 0 | 158 | 566 | 155 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 113 | 0 | 0 | 1 | 0 | 115 | | 114 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 142 | 0 | 3 | 0 | 0 | 150 | | 145 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 119 | 0 | 0 | 0 | 0 | 119 | 508 | 119 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 114 | 0 | 2 | 0 | 0 | 119 | | 116 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 119 | 0 | 6 | 0 | 0 | 134 | | 125 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 129 | 0 | 2 | 1 | 0 | 136 | | 132 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 210 | 0 | 1 | 0 | 0 | 213 | 742 | 211 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 145 | 0 | 0 | 1 | 0 | 147 | | 146 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 185 | 0 | 1 | 2 | 0 | 192 | | 188 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 189 | 0 | 0 | 1 | 0 | 191 | | 190 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 146 | 0 | 0 | 0 | 0 | 146 | 701 | 146 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 190 | 0 | 1 | 3 | 0 | 199 | | 194 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 190 | 0 | 2 | 0 | 0 | 195 | | 192 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 155 | 0 | 0 | 3 | 0 | 161 | | 158 |
| 7:00 | 7:15 | 93 | 0 | 0 | 0 | 0 | 93 | | 93 | 19:00 | 19:15 | 166 | 0 | 0 | 2 | 0 | 170 | 512 | 168 |
| 7:15 | 7:30 | 151 | 0 | 2 | 1 | 0 | 158 | 467 | 154 | 19:15 | 19:30 | 144 | 0 | 0 | 1 | 0 | 146 | | 145 |
| 7:30 | 7:45 | 97 | 0 | 1 | 0 | 0 | 100 | | 98 | 19:30 | 19:45 | 101 | 0 | 0 | 1 | 0 | 103 | | 102 |
| 7:45 | 8:00 | 114 | 0 | 0 | 1 | 0 | 116 | | 115 | 19:45 | 20:00 | 93 | 0 | 0 | 0 | 0 | 93 | | 93 |
| 8:00 | 8:15 | 95 | 0 | 2 | 1 | 0 | 102 | | 98 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 138 | 0 | 4 | 0 | 0 | 148 | 508 | 142 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 112 | 0 | 3 | 0 | 0 | 120 | | 115 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 133 | 0 | 2 | 0 | 0 | 138 | | 135 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 129 | 0 | 0 | 0 | 0 | 129 | | 129 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 101 | 0 | 3 | 1 | 0 | 111 | | 105 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 109 | 0 | 4 | 0 | 0 | 119 | 478 | 113 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 109 | 0 | 4 | 0 | 0 | 119 | | 113 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 107 | 0 | 1 | 1 | 0 | 112 | | 109 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 96 | 0 | 4 | 1 | 0 | 108 | 445 | 101 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 119 | 0 | 3 | 0 | 0 | 127 | | 122 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 96 | 0 | 1 | 0 | 0 | 99 | | 97 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 81 | 0 | 0 | 0 | 0 | 81 | 81 |
| 8:00 | 9:00 | 135 | 0 | 3 | 1 | 0 | 145 | 139 |
| 9:00 | 10:00 | 147 | 0 | 5 | 1 | 0 | 162 | 153 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 156 | 0 | 3 | 0 | 0 | 164 | 159 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 159 | 0 | 4 | 0 | 0 | 169 | 163 |
| 13:00 | 14:00 | 165 | 0 | 3 | 0 | 0 | 173 | 168 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 98 | 0 | 1 | 0 | 0 | 101 | 99 |
| 18:00 | 19:00 | 68 | 0 | 1 | 0 | 0 | 71 | 69 |
| 19:00 | 20:00 | 83 | 0 | 3 | 2 | 0 | 95 | 88 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
1 > 4 Av. Dr. Jesuino Marcondes Machado conv à dir. Av. Dr. Morães Sales

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 46 | 0 | 2 | 0 | 0 | 51 | | 48 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 39 | 0 | 1 | 0 | 0 | 42 | 169 | 40 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 39 | 0 | 1 | 0 | 0 | 42 | | 40 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 35 | 0 | 0 | 0 | 0 | 35 | | 35 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 36 | 0 | 2 | 0 | 0 | 41 | 173 | 38 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 46 | 0 | 0 | 0 | 0 | 46 | | 46 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 36 | 0 | 0 | 0 | 0 | 36 | | 36 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 47 | 0 | 1 | 0 | 0 | 50 | | 48 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 31 | 0 | 0 | 0 | 0 | 31 | 101 | 31 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 23 | 0 | 0 | 0 | 0 | 23 | | 23 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 21 | 0 | 1 | 0 | 0 | 24 | | 22 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 23 | 0 | 0 | 0 | 0 | 23 | | 23 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 11 | 0 | 1 | 0 | 0 | 14 | 71 | 12 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 15 | 0 | 0 | 0 | 0 | 15 | | 15 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 22 | 0 | 0 | 0 | 0 | 22 | | 22 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 20 | 0 | 0 | 0 | 0 | 20 | | 20 |
| 7:00 | 7:15 | 10 | 0 | 0 | 0 | 0 | 10 | | 10 | 19:00 | 19:15 | 12 | 0 | 0 | 0 | 0 | 12 | 95 | 12 |
| 7:15 | 7:30 | 22 | 0 | 0 | 0 | 0 | 22 | 81 | 22 | 19:15 | 19:30 | 29 | 0 | 1 | 0 | 0 | 32 | | 30 |
| 7:30 | 7:45 | 19 | 0 | 0 | 0 | 0 | 19 | | 19 | 19:30 | 19:45 | 26 | 0 | 1 | 1 | 0 | 31 | | 28 |
| 7:45 | 8:00 | 30 | 0 | 0 | 0 | 0 | 30 | | 30 | 19:45 | 20:00 | 16 | 0 | 1 | 1 | 0 | 21 | | 18 |
| 8:00 | 8:15 | 28 | 0 | 1 | 1 | 0 | 33 | | 30 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 33 | 0 | 0 | 0 | 0 | 33 | 145 | 33 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 32 | 0 | 0 | 0 | 0 | 32 | | 32 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 42 | 0 | 2 | 0 | 0 | 47 | | 44 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 46 | 0 | 0 | 1 | 0 | 48 | | 47 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 30 | 0 | 2 | 0 | 0 | 35 | 162 | 32 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 27 | 0 | 2 | 0 | 0 | 32 | | 29 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 44 | 0 | 1 | 0 | 0 | 47 | | 45 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 41 | 0 | 1 | 0 | 0 | 44 | | 42 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 37 | 0 | 0 | 0 | 0 | 37 | 164 | 37 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 41 | 0 | 0 | 0 | 0 | 41 | | 41 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 37 | 0 | 2 | 0 | 0 | 42 | | 39 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

2 > 4 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1709 | 0 | 22 | 42 | 0 | 1848 | 1773 |
| 8:00 | 9:00 | 1674 | 0 | 27 | 43 | 0 | 1828 | 1744 |
| 9:00 | 10:00 | 1320 | 0 | 34 | 28 | 0 | 1461 | 1382 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1099 | 0 | 43 | 25 | 0 | 1257 | 1167 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1366 | 0 | 26 | 25 | 0 | 1481 | 1417 |
| 13:00 | 14:00 | 1460 | 0 | 36 | 24 | 0 | 1598 | 1520 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1324 | 0 | 12 | 50 | 0 | 1454 | 1386 |
| 18:00 | 19:00 | 1348 | 0 | 14 | 38 | 0 | 1459 | 1400 |
| 19:00 | 20:00 | 1212 | 0 | 15 | 29 | 0 | 1308 | 1256 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
2 > 4 Av. Dr. Morães Sales em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|------|-----|----------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 354 | 0 | 6 | 6 | 0 | 381 | | 366 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 352 | 0 | 8 | 5 | 0 | 382 | 1481 | 365 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:30 | 12:45 | 318 | 0 | 3 | 7 | 0 | 340 | | 328 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 342 | 0 | 9 | 7 | 0 | 379 | | 358 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 398 | 0 | 6 | 3 | 0 | 419 | 1598 | 407 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 321 | 0 | 10 | 8 | 0 | 362 | | 339 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 369 | 0 | 8 | 8 | 0 | 405 | | 385 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 372 | 0 | 12 | 5 | 0 | 412 | | 389 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 329 | 0 | 2 | 13 | 0 | 360 | 1454 | 344 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 354 | 0 | 7 | 14 | 0 | 400 | | 375 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 334 | 0 | 1 | 15 | 0 | 367 | | 350 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 307 | 0 | 2 | 8 | 0 | 328 | | 317 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 386 | 0 | 7 | 11 | 0 | 426 | 1459 | 404 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 321 | 0 | 2 | 9 | 0 | 344 | | 332 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 306 | 0 | 1 | 8 | 0 | 325 | | 315 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 335 | 0 | 4 | 10 | 0 | 365 | | 349 |
| 7:00 | 7:15 | 417 | 0 | 1 | 12 | 0 | 444 | | 430 | 19:00 | 19:15 | 350 | 0 | 5 | 11 | 0 | 385 | 1308 | 366 |
| 7:15 | 7:30 | 412 | 0 | 4 | 8 | 0 | 438 | 1848 | 424 | 19:15 | 19:30 | 294 | 0 | 1 | 4 | 0 | 305 | | 299 |
| 7:30 | 7:45 | 507 | 0 | 7 | 11 | 0 | 547 | | 525 | 19:30 | 19:45 | 310 | 0 | 5 | 11 | 0 | 345 | | 326 |
| 7:45 | 8:00 | 373 | 0 | 10 | 11 | 0 | 420 | | 394 | 19:45 | 20:00 | 258 | 0 | 4 | 3 | 0 | 274 | | 265 |
| 8:00 | 8:15 | 429 | 0 | 6 | 11 | 0 | 466 | | 446 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 379 | 0 | 9 | 12 | 0 | 426 | 1828 | 400 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 442 | 0 | 6 | 11 | 0 | 479 | | 459 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 424 | 0 | 6 | 9 | 0 | 457 | | 439 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 332 | 0 | 4 | 10 | 0 | 362 | | 346 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 339 | 0 | 14 | 4 | 0 | 382 | 1461 | 357 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 320 | 0 | 10 | 10 | 0 | 365 | | 340 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 329 | 0 | 6 | 4 | 0 | 352 | | 339 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 268 | 0 | 12 | 4 | 0 | 306 | | 284 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 248 | 0 | 11 | 5 | 0 | 286 | 1257 | 264 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 308 | 0 | 8 | 7 | 0 | 342 | | 323 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 275 | 0 | 12 | 9 | 0 | 323 | | 296 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

4 > 2 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|------|---|-------|-----|---|------|------|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1454 | 0 | 25 | 49 | 0 | 1615 | 1528 |
| 8:00 | 9:00 | 1280 | 0 | 47 | 40 | 0 | 1478 | 1367 |
| 9:00 | 10:00 | 1206 | 0 | 40 | 29 | 0 | 1364 | 1275 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1275 | 0 | 32 | 22 | 0 | 1399 | 1329 |

| Período Tarde | | | | | | | | |
|----------------|-------|------|---|-------|-----|---|------|------|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1495 | 0 | 25 | 26 | 0 | 1610 | 1546 |
| 13:00 | 14:00 | 1313 | 0 | 30 | 20 | 0 | 1428 | 1363 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1606 | 0 | 14 | 32 | 0 | 1705 | 1652 |
| 18:00 | 19:00 | 1608 | 0 | 14 | 37 | 0 | 1717 | 1659 |
| 19:00 | 20:00 | 1340 | 0 | 7 | 38 | 0 | 1434 | 1385 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
4 > 2
Av. Dr. Morães Sales em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|------|-----|----------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 385 | 0 | 8 | 4 | 0 | 413 | | 397 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 377 | 0 | 4 | 8 | 0 | 403 | 1610 | 389 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 380 | 0 | 8 | 7 | 0 | 414 | | 395 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 353 | 0 | 5 | 7 | 0 | 380 | | 365 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 358 | 0 | 7 | 4 | 0 | 384 | 1428 | 369 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 312 | 0 | 10 | 5 | 0 | 347 | | 327 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 305 | 0 | 8 | 6 | 0 | 337 | | 319 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 338 | 0 | 5 | 5 | 0 | 361 | | 348 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 367 | 0 | 3 | 6 | 0 | 387 | 1705 | 376 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 446 | 0 | 3 | 5 | 0 | 464 | | 454 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 412 | 0 | 5 | 12 | 0 | 449 | | 429 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 381 | 0 | 3 | 9 | 0 | 407 | | 393 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 435 | 0 | 2 | 11 | 0 | 462 | 1717 | 448 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 420 | 0 | 4 | 10 | 0 | 450 | | 434 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 380 | 0 | 3 | 7 | 0 | 402 | | 390 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 373 | 0 | 5 | 9 | 0 | 404 | | 387 |
| 7:00 | 7:15 | 369 | 0 | 5 | 12 | 0 | 406 | | 386 | 19:00 | 19:15 | 342 | 0 | 3 | 14 | 0 | 378 | 1434 | 359 |
| 7:15 | 7:30 | 348 | 0 | 4 | 9 | 0 | 376 | 1615 | 361 | 19:15 | 19:30 | 384 | 0 | 1 | 10 | 0 | 407 | | 395 |
| 7:30 | 7:45 | 390 | 0 | 12 | 16 | 0 | 452 | | 418 | 19:30 | 19:45 | 342 | 0 | 0 | 6 | 0 | 354 | | 348 |
| 7:45 | 8:00 | 347 | 0 | 4 | 12 | 0 | 381 | | 363 | 19:45 | 20:00 | 272 | 0 | 3 | 8 | 0 | 296 | | 283 |
| 8:00 | 8:15 | 372 | 0 | 20 | 11 | 0 | 444 | | 403 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 318 | 0 | 10 | 11 | 0 | 365 | 1478 | 339 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 310 | 0 | 10 | 9 | 0 | 353 | | 329 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 280 | 0 | 7 | 9 | 0 | 316 | | 296 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 320 | 0 | 10 | 8 | 0 | 361 | | 338 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 279 | 0 | 12 | 8 | 0 | 325 | 1364 | 299 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 321 | 0 | 12 | 9 | 0 | 369 | | 342 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 286 | 0 | 6 | 4 | 0 | 309 | | 296 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 300 | 0 | 12 | 4 | 0 | 338 | | 316 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 285 | 0 | 9 | 6 | 0 | 320 | 1399 | 300 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 327 | 0 | 7 | 6 | 0 | 357 | | 340 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 363 | 0 | 4 | 6 | 0 | 385 | | 373 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

4 > 3 Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 363 | 0 | 4 | 3 | 0 | 379 | 370 |
| 8:00 | 9:00 | 358 | 0 | 5 | 0 | 0 | 371 | 363 |
| 9:00 | 10:00 | 367 | 0 | 4 | 0 | 0 | 377 | 371 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 436 | 0 | 11 | 0 | 0 | 464 | 447 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 460 | 0 | 6 | 0 | 0 | 475 | 466 |
| 13:00 | 14:00 | 415 | 0 | 4 | 0 | 0 | 425 | 419 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 480 | 0 | 4 | 1 | 0 | 492 | 485 |
| 18:00 | 19:00 | 463 | 0 | 3 | 6 | 0 | 483 | 472 |
| 19:00 | 20:00 | 475 | 0 | 2 | 6 | 0 | 492 | 483 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|--|
| Movimento Contado | |
| 4 > 3 | Av. Dr. Morães Sales conv à dir. Av. Dr. Manoel Afonso Ferreira |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 123 | 0 | 1 | 0 | 0 | 126 | 124 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 128 | 0 | 2 | 0 | 0 | 133 | 130 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 95 | 0 | 3 | 0 | 0 | 103 | 98 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 114 | 0 | 0 | 0 | 0 | 114 | 114 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 104 | 0 | 1 | 0 | 0 | 107 | 105 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 100 | 0 | 3 | 0 | 0 | 108 | 103 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 94 | 0 | 0 | 0 | 0 | 94 | 94 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 117 | 0 | 0 | 0 | 0 | 117 | 117 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 121 | 0 | 2 | 0 | 0 | 126 | 123 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 124 | 0 | 0 | 1 | 0 | 126 | 125 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 123 | 0 | 2 | 0 | 0 | 128 | 125 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 112 | 0 | 0 | 0 | 0 | 112 | 112 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 119 | 0 | 1 | 2 | 0 | 126 | 122 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 112 | 0 | 1 | 1 | 0 | 117 | 114 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 103 | 0 | 1 | 1 | 0 | 108 | 105 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 129 | 0 | 0 | 2 | 0 | 133 | 131 | |
| 7:00 | 7:15 | 108 | 0 | 2 | 2 | 0 | 117 | 112 | 379 | 19:00 | 19:15 | 130 | 0 | 0 | 2 | 0 | 134 | 132 | |
| 7:15 | 7:30 | 98 | 0 | 0 | 1 | 0 | 100 | 99 | 379 | 19:15 | 19:30 | 151 | 0 | 1 | 1 | 0 | 156 | 153 | |
| 7:30 | 7:45 | 80 | 0 | 2 | 0 | 0 | 85 | 82 | 379 | 19:30 | 19:45 | 103 | 0 | 1 | 2 | 0 | 110 | 106 | |
| 7:45 | 8:00 | 77 | 0 | 0 | 0 | 0 | 77 | 77 | 379 | 19:45 | 20:00 | 91 | 0 | 0 | 1 | 0 | 93 | 92 | |
| 8:00 | 8:15 | 85 | 0 | 2 | 0 | 0 | 90 | 87 | 371 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 76 | 0 | 0 | 0 | 0 | 76 | 76 | 371 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 100 | 0 | 2 | 0 | 0 | 105 | 102 | 371 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 97 | 0 | 1 | 0 | 0 | 100 | 98 | 377 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 94 | 0 | 2 | 0 | 0 | 99 | 96 | 377 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 99 | 0 | 2 | 0 | 0 | 104 | 101 | 377 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 90 | 0 | 0 | 0 | 0 | 90 | 90 | 377 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 84 | 0 | 0 | 0 | 0 | 84 | 84 | 377 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 98 | 0 | 2 | 0 | 0 | 103 | 100 | 464 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 103 | 0 | 1 | 0 | 0 | 106 | 104 | 464 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 107 | 0 | 5 | 0 | 0 | 120 | 112 | 464 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 128 | 0 | 3 | 0 | 0 | 136 | 131 | 464 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

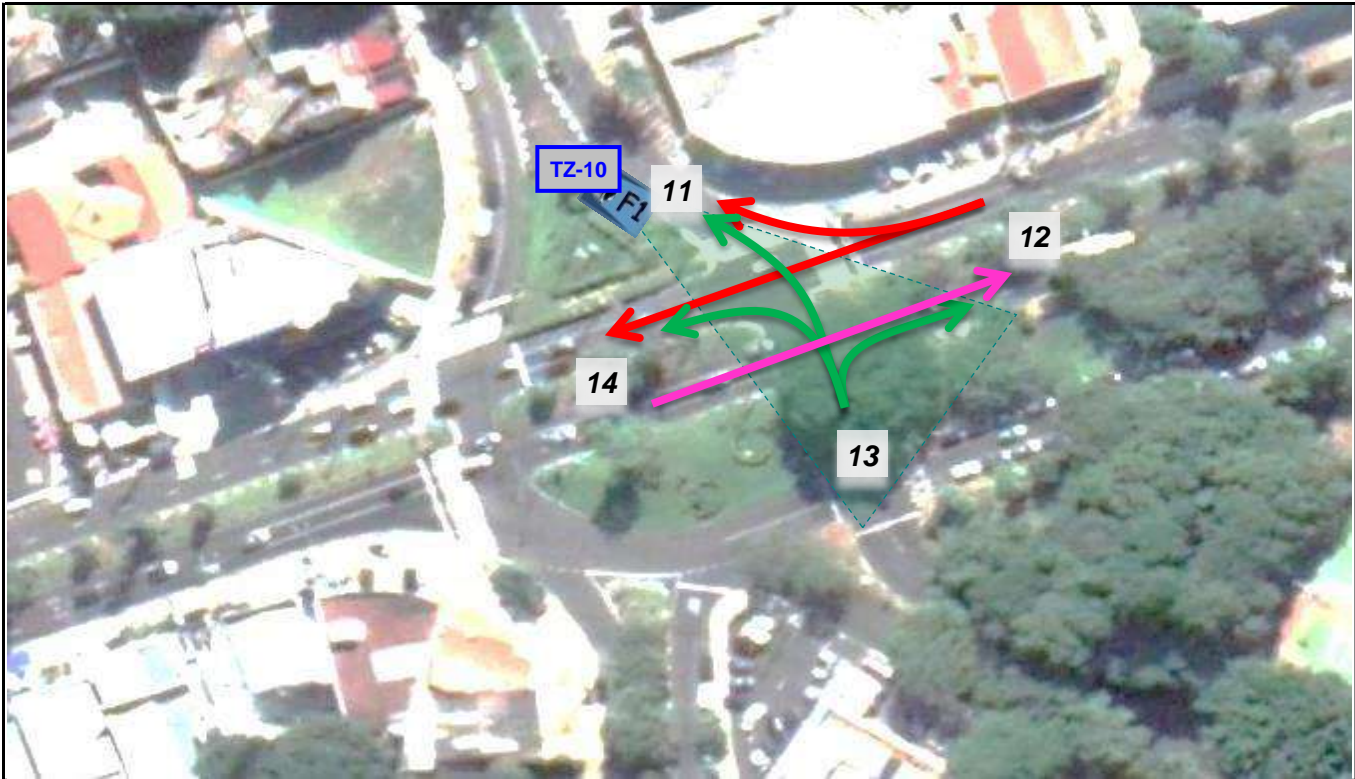
002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado

Ref.: RT-AAP.001-3J21-002_20191022_A

Campinas - SP

Novembro de 2019

Croquis **002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019**



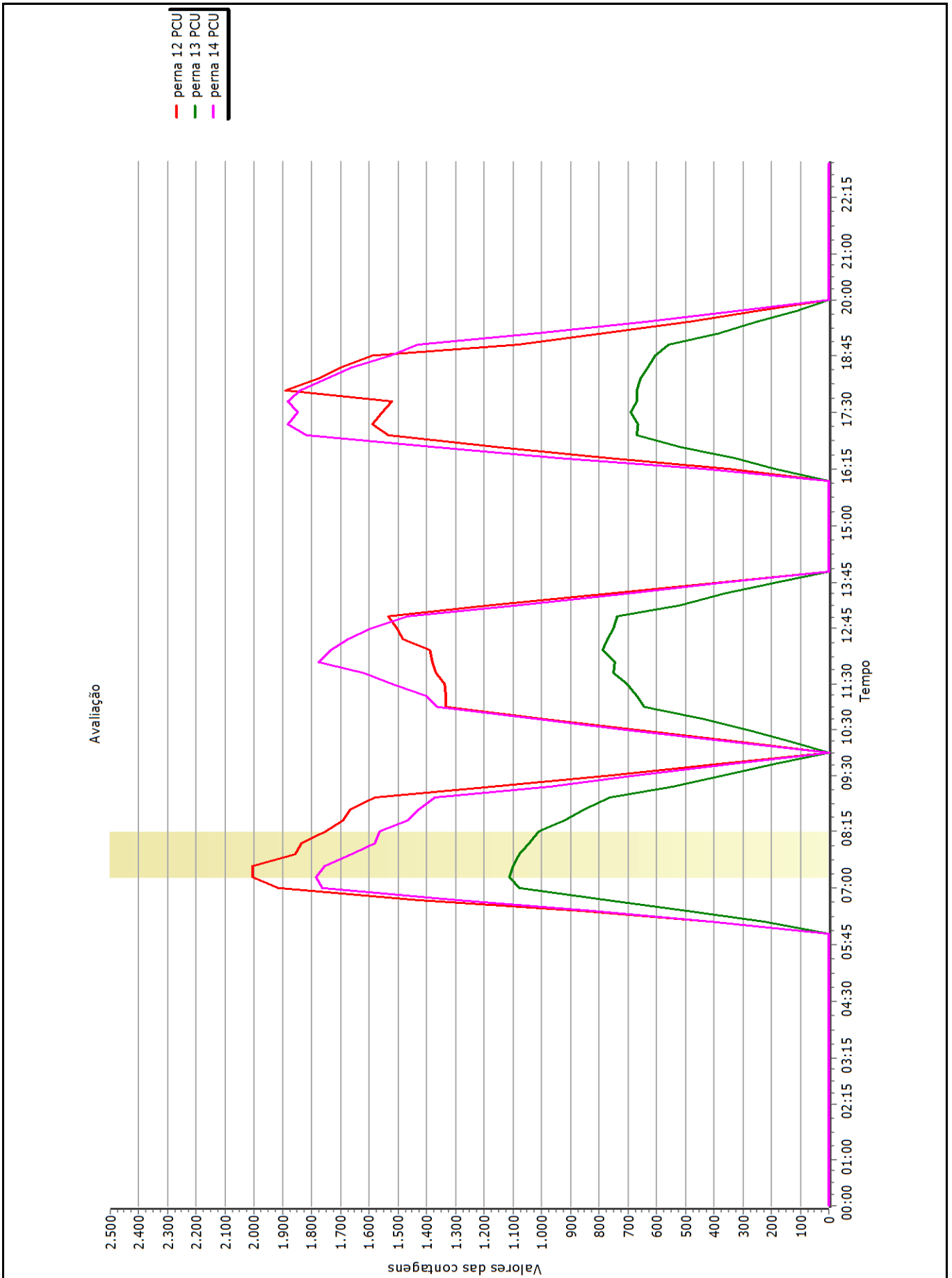
Vídeos



Movimentos Contados

- 12 > 11 Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado
- 12 > 14 Av. Dr. Morães Sales em frente
- 13 > 11 Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado
- 13 > 12 Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales
- 13 > 14 Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales
- 14 > 12 Av. Dr. Morães Sales em frente

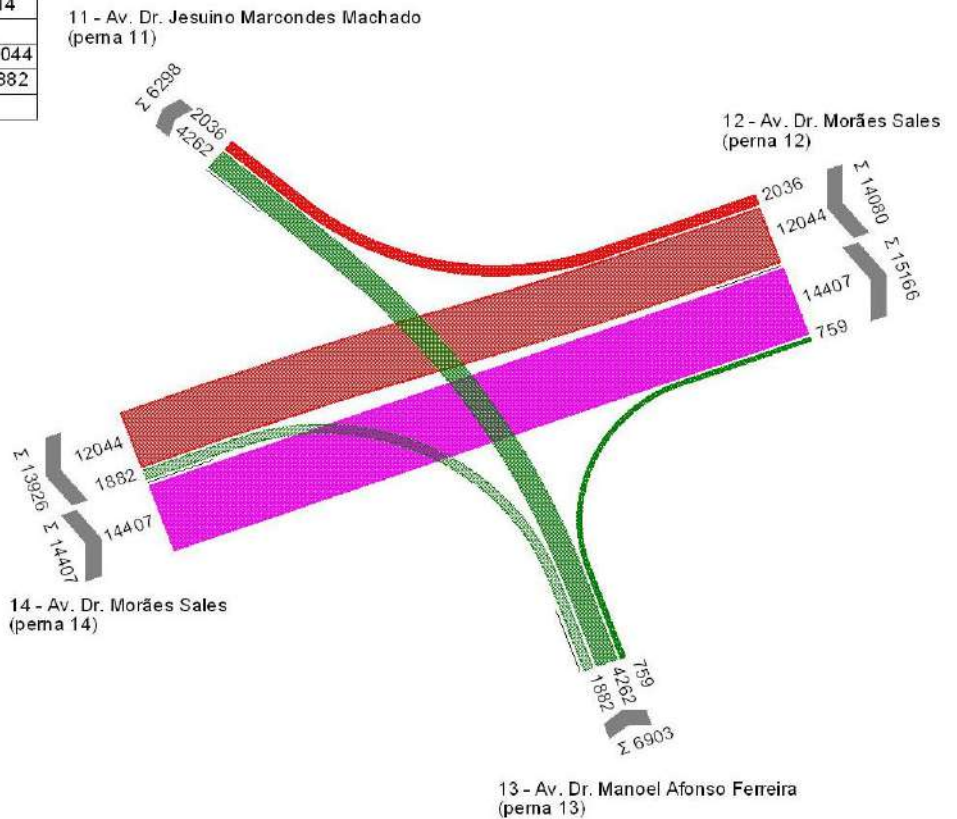
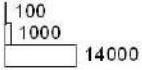
Perfil Horário 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019



Volume Total Diário

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Total On the basis of a time period 22.10.2019 00:00 - 23.10.2019 00:00
 35390 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|------|-------|----|-------|
| 11 | | | | |
| 12 | 2036 | | | 12044 |
| 13 | 4262 | 759 | | 1882 |
| 14 | | 14407 | | |



Volume Hora Pico

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Hora de pico 07:15 - 08:15
 On the basis of a time period 22.10.2019 00:00 - 23.10.2019 00:00
 4900 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 258 | | | 1748 |
| 13 | 760 | 61 | | 289 |
| 14 | | 1784 | | |

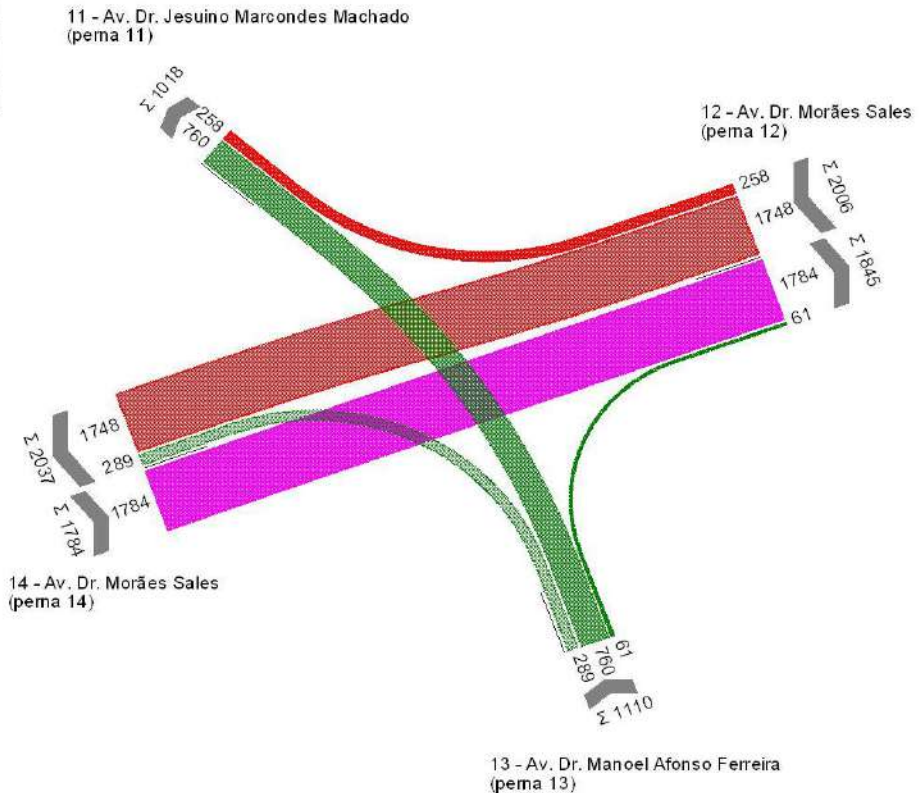
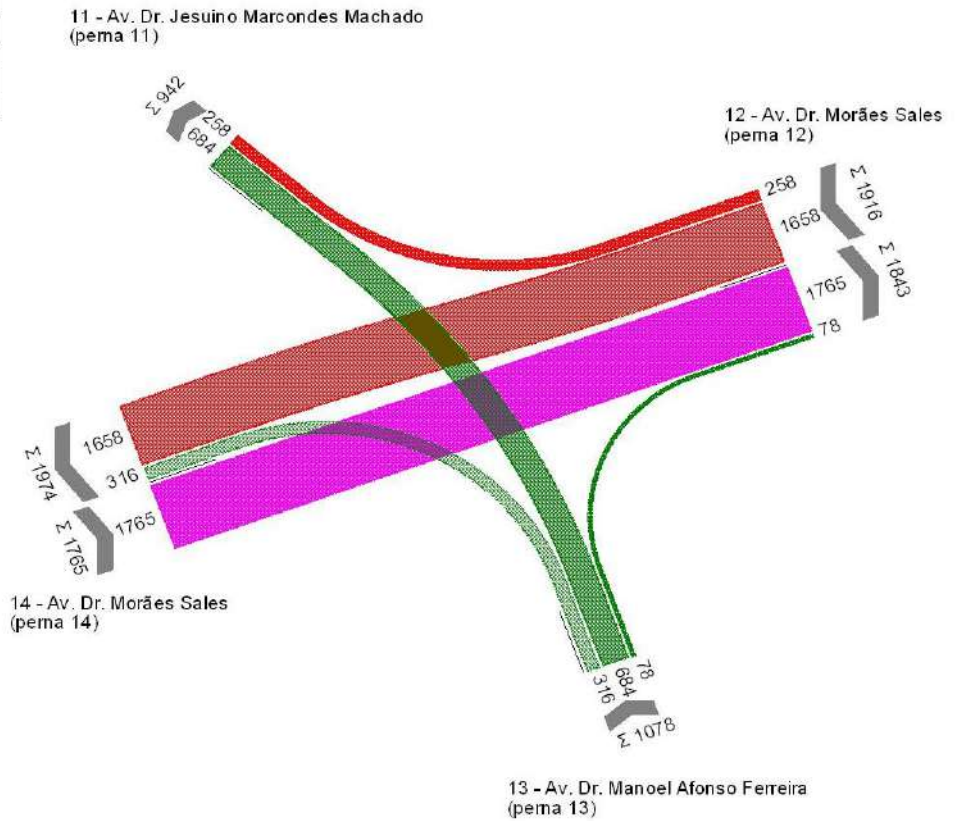
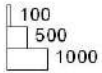


Diagrama de Fluxos **002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019**

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 22.10.2019 07:00 - 22.10.2019 08:00
 4759 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 258 | | | 1658 |
| 13 | 684 | 78 | | 316 |
| 14 | | 1765 | | |



Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 22.10.2019 08:00 - 22.10.2019 09:00
 4480 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 267 | | | 1567 |
| 13 | 766 | 58 | | 220 |
| 14 | | 1582 | | |

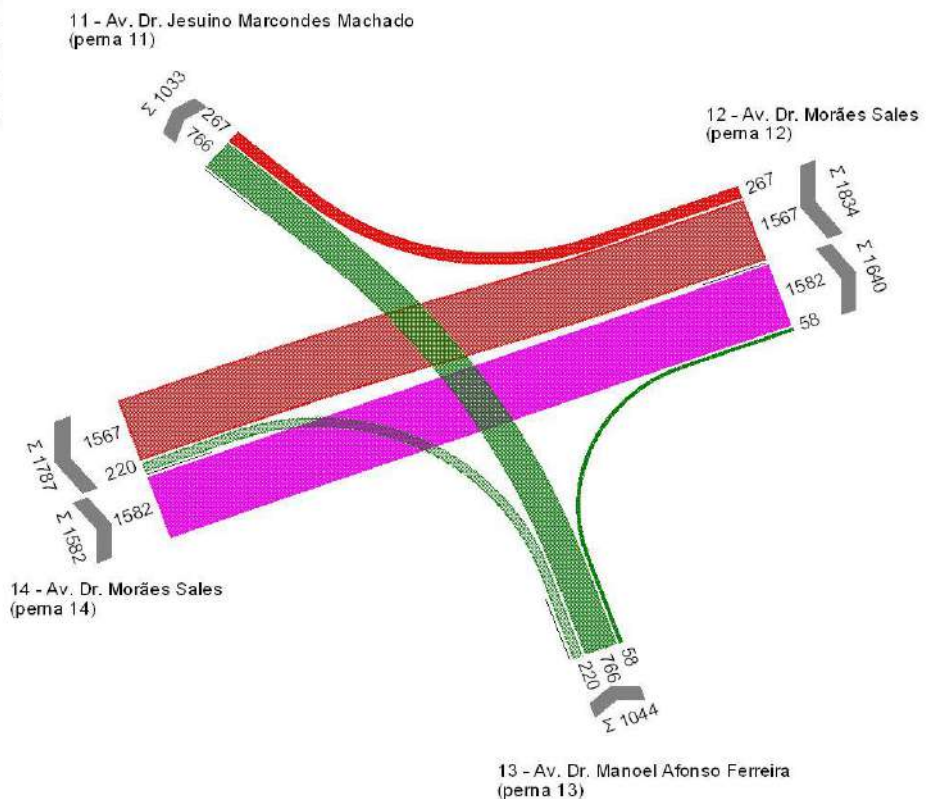
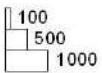


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 22.10.2019 09:00 - 22.10.2019 10:00
 3714 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 237 | | | 1342 |
| 13 | 485 | 78 | | 200 |
| 14 | | 1372 | | |

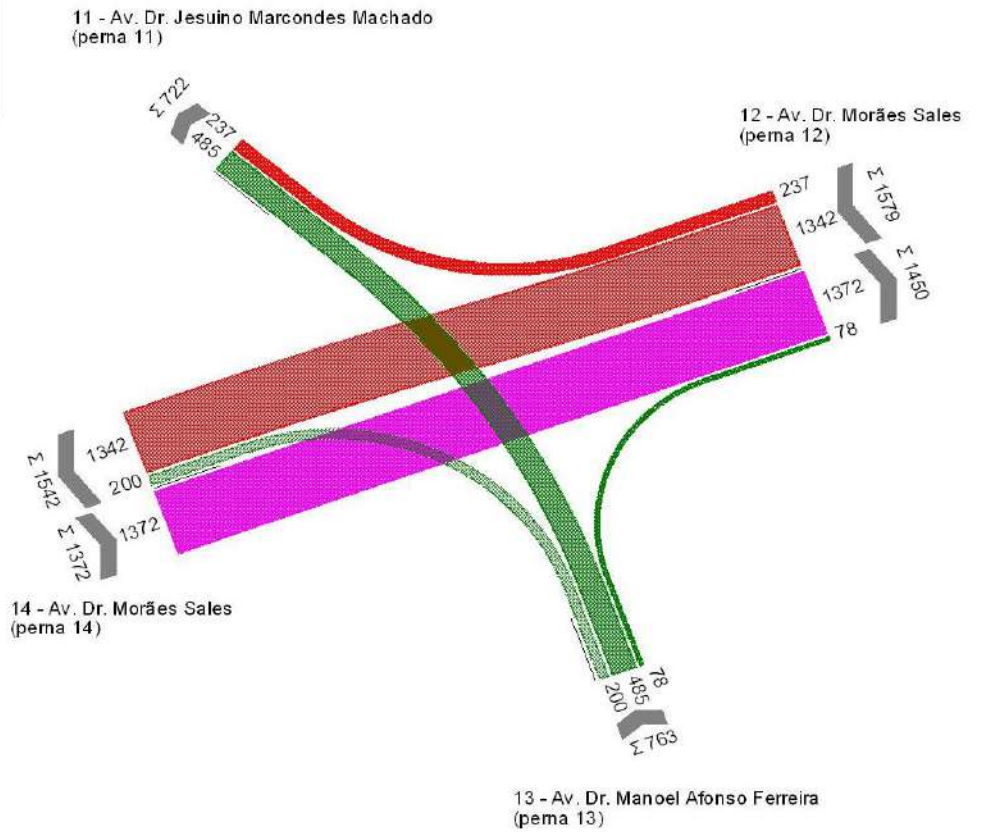
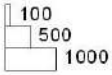
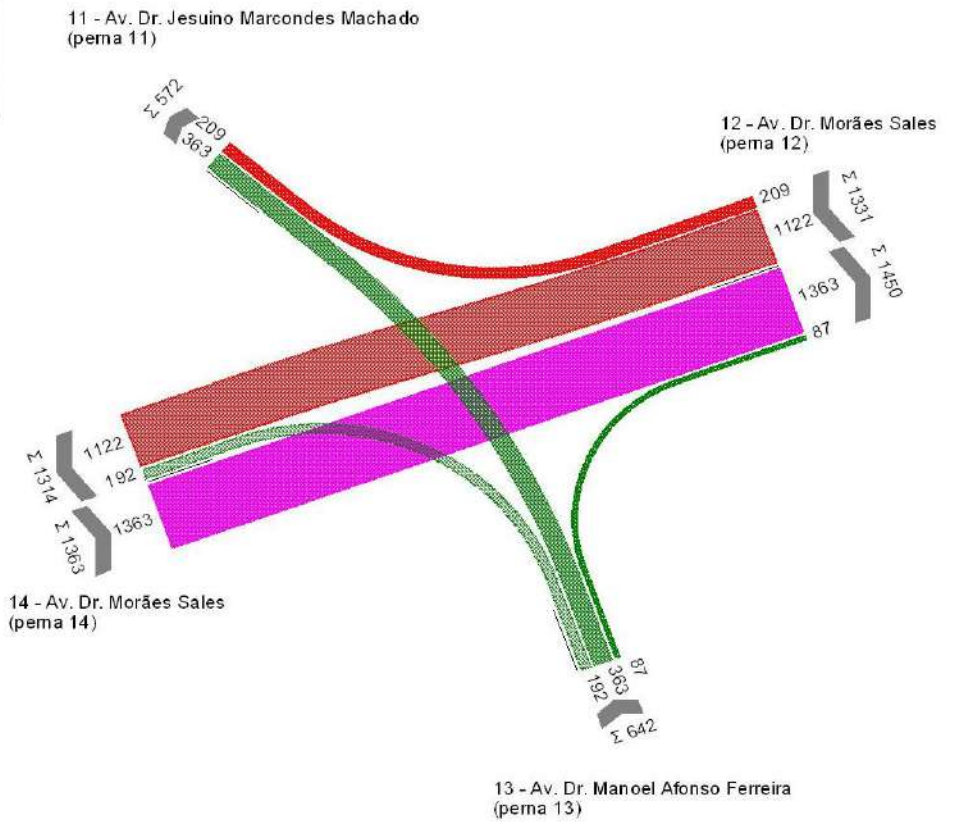
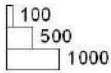


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 22.10.2019 11:00 - 22.10.2019 12:00
 3336 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 209 | | | 1122 |
| 13 | 363 | 87 | | 192 |
| 14 | | 1363 | | |



Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 22.10.2019 12:00 - 22.10.2019 13:00
 3900 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 206 | | | 1175 |
| 13 | 417 | 94 | | 234 |
| 14 | | 1774 | | |

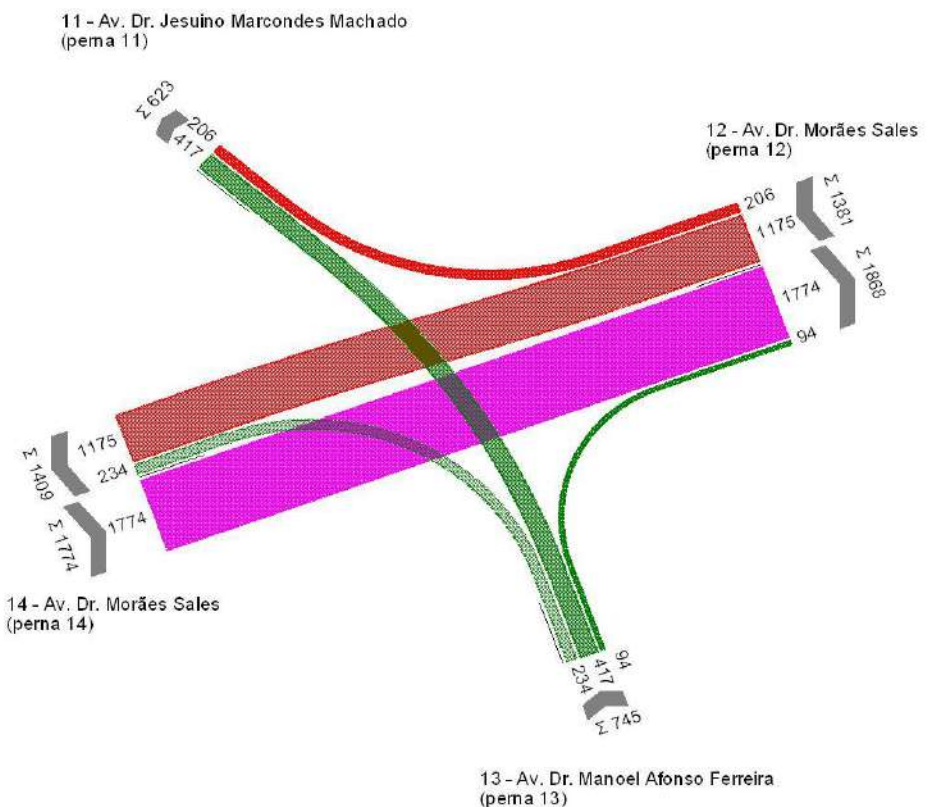
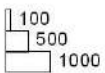


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 22.10.2019 13:00 - 22.10.2019 14:00
 3732 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 242 | | | 1292 |
| 13 | 425 | 86 | | 224 |
| 14 | | 1463 | | |

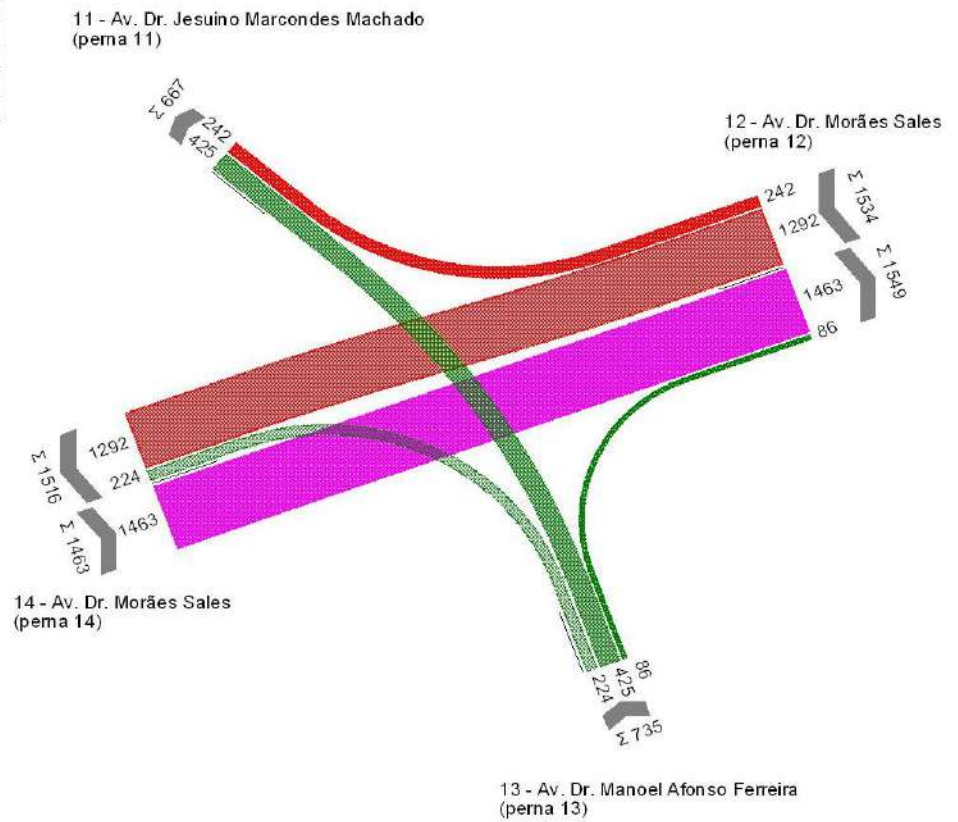
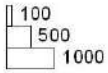
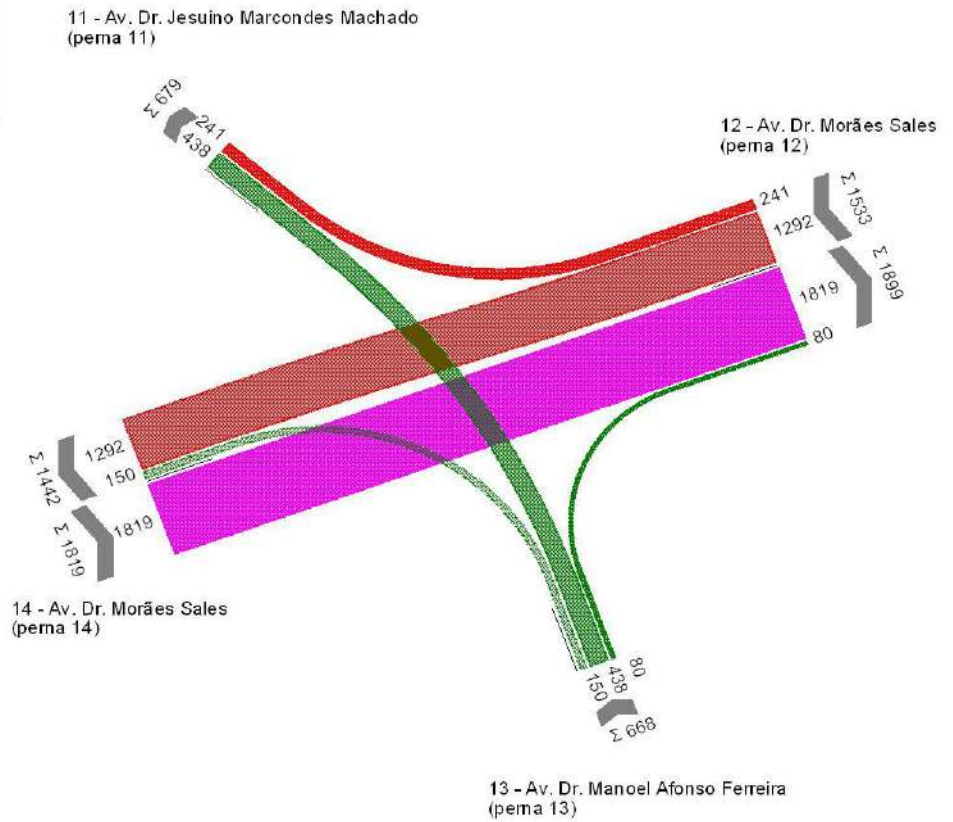
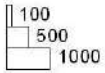


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 22.10.2019 17:00 - 22.10.2019 18:00
 4020 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 241 | | | 1292 |
| 13 | 438 | 80 | | 150 |
| 14 | | 1819 | | |



Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 22.10.2019 18:00 - 22.10.2019 19:00
 4400 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 216 | | | 1676 |
| 13 | 422 | 102 | | 144 |
| 14 | | 1840 | | |

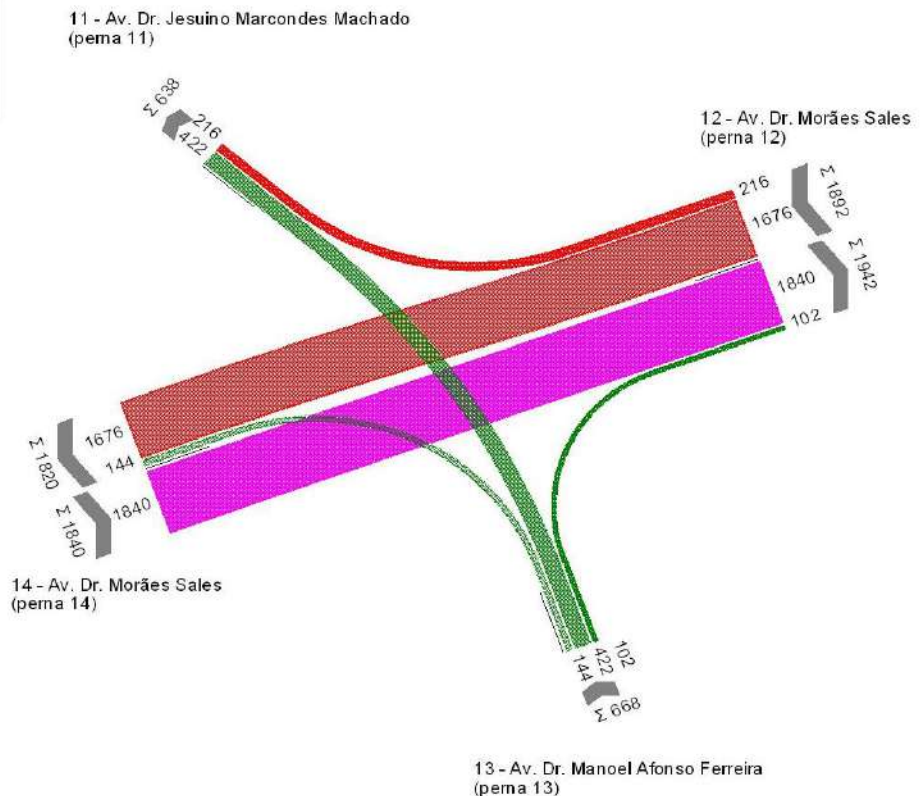


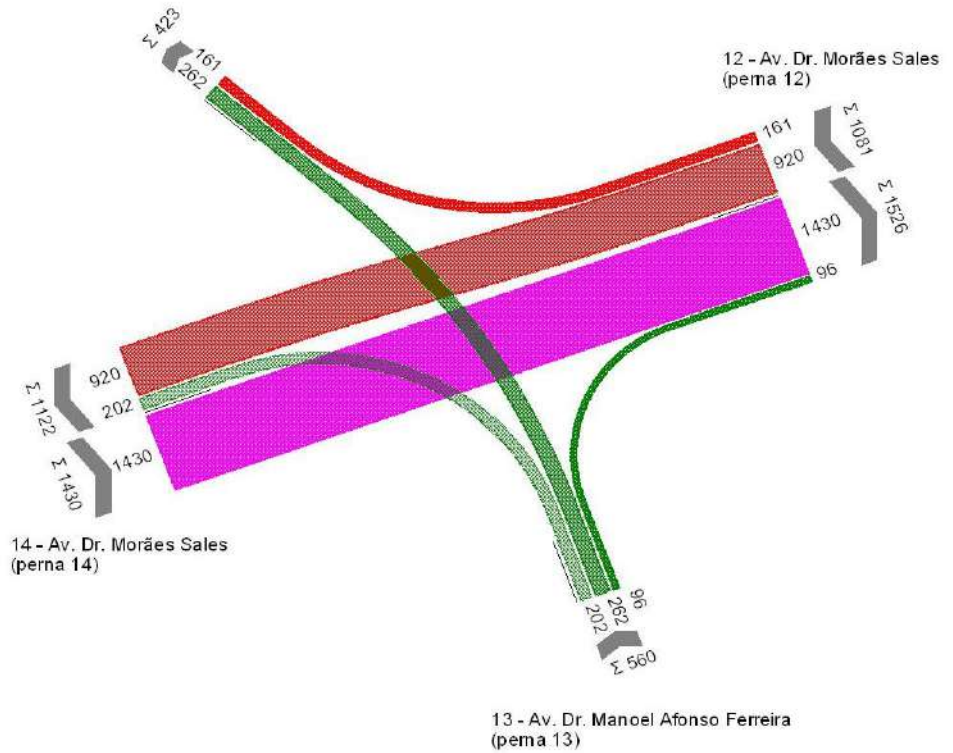
Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Contagem De 22-10-2019 as 00h00 até 23-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 22.10.2019 19:00 - 22.10.2019 20:00
 3071 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|-----|
| 11 | | | | |
| 12 | 161 | | | 920 |
| 13 | 262 | 96 | | 202 |
| 14 | | 1430 | | |

11 - Av. Dr. Jesuino Marcondes Machado (perna 11)

12 - Av. Dr. Morães Sales (perna 12)



PCU

002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 22/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

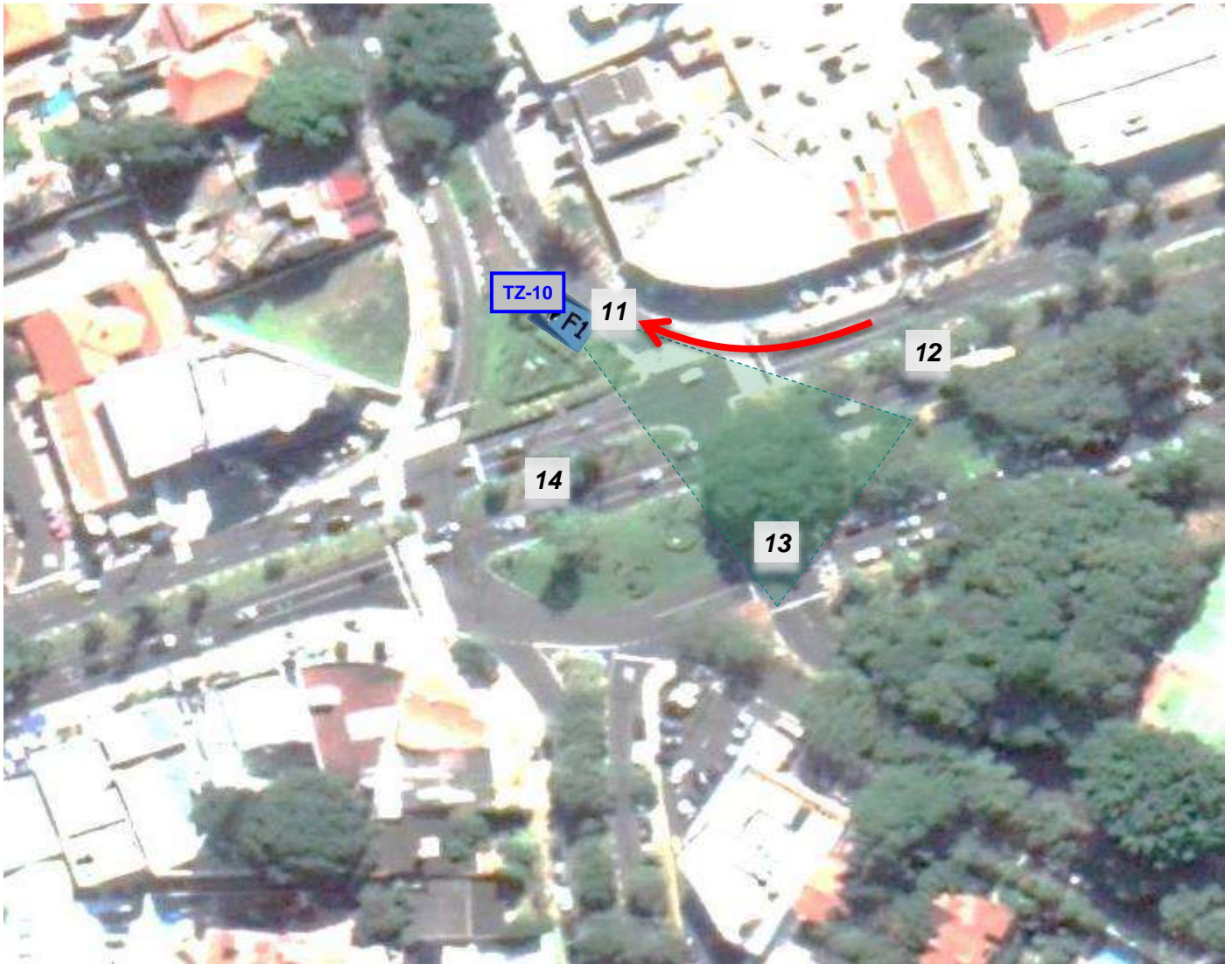
- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

12 > 11 Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 255 | 0 | 1 | 0 | 0 | 258 | 256 |
| 8:00 | 9:00 | 262 | 0 | 2 | 0 | 0 | 267 | 264 |
| 9:00 | 10:00 | 227 | 0 | 4 | 0 | 0 | 237 | 231 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 204 | 0 | 2 | 0 | 0 | 209 | 206 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 204 | 0 | 1 | 0 | 0 | 207 | 205 |
| 13:00 | 14:00 | 234 | 0 | 3 | 0 | 0 | 242 | 237 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 241 | 0 | 0 | 0 | 0 | 241 | 241 |
| 18:00 | 19:00 | 213 | 0 | 1 | 0 | 0 | 216 | 214 |
| 19:00 | 20:00 | 156 | 0 | 2 | 0 | 0 | 161 | 158 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---|
| Movimento Contado | |
| 12 > 11 | Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|----|----------------|-------|-----|---|-------|-----|---|-----|-----|--|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 50 | 0 | 0 | 0 | 0 | 50 | 50 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 53 | 0 | 0 | 0 | 0 | 53 | 53 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 36 | 0 | 0 | 0 | 0 | 36 | 36 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 65 | 0 | 1 | 0 | 0 | 68 | 66 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 53 | 0 | 1 | 0 | 0 | 56 | 54 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 63 | 0 | 0 | 0 | 0 | 63 | 63 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 57 | 0 | 0 | 0 | 0 | 57 | 57 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 61 | 0 | 2 | 0 | 0 | 66 | 63 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 56 | 0 | 0 | 0 | 0 | 56 | 56 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 54 | 0 | 0 | 0 | 0 | 54 | 54 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 70 | 0 | 0 | 0 | 0 | 70 | 70 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 61 | 0 | 0 | 0 | 0 | 61 | 61 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 55 | 0 | 0 | 0 | 0 | 55 | 55 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 50 | 0 | 0 | 0 | 0 | 50 | 50 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 55 | 0 | 0 | 0 | 0 | 55 | 55 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 53 | 0 | 1 | 0 | 0 | 56 | 54 | |
| 7:00 | 7:15 | 63 | 0 | 0 | 0 | 0 | 63 | 63 | 63 | 19:00 | 19:15 | 44 | 0 | 1 | 0 | 0 | 47 | 45 | |
| 7:15 | 7:30 | 66 | 0 | 0 | 0 | 0 | 66 | 66 | 66 | 19:15 | 19:30 | 42 | 0 | 0 | 0 | 0 | 42 | 42 | |
| 7:30 | 7:45 | 66 | 0 | 0 | 0 | 0 | 66 | 66 | 66 | 19:30 | 19:45 | 37 | 0 | 0 | 0 | 0 | 37 | 37 | |
| 7:45 | 8:00 | 60 | 0 | 1 | 0 | 0 | 63 | 61 | 61 | 19:45 | 20:00 | 33 | 0 | 1 | 0 | 0 | 36 | 34 | |
| 8:00 | 8:15 | 64 | 0 | 0 | 0 | 0 | 64 | 64 | 64 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 66 | 0 | 2 | 0 | 0 | 71 | 68 | 68 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 63 | 0 | 0 | 0 | 0 | 63 | 63 | 63 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 69 | 0 | 0 | 0 | 0 | 69 | 69 | 69 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 61 | 0 | 0 | 0 | 0 | 61 | 61 | 61 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 59 | 0 | 1 | 0 | 0 | 62 | 60 | 60 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 55 | 0 | 2 | 0 | 0 | 60 | 57 | 57 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 52 | 0 | 1 | 0 | 0 | 55 | 53 | 53 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 49 | 0 | 1 | 0 | 0 | 52 | 50 | 50 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 67 | 0 | 0 | 0 | 0 | 67 | 67 | 67 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 40 | 0 | 0 | 0 | 0 | 40 | 40 | 40 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 48 | 0 | 1 | 0 | 0 | 51 | 49 | 49 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

12 > 14 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1517 | 0 | 17 | 49 | 0 | 1658 | 1583 |
| 8:00 | 9:00 | 1424 | 0 | 26 | 39 | 0 | 1567 | 1489 |
| 9:00 | 10:00 | 1191 | 0 | 38 | 28 | 0 | 1342 | 1257 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 997 | 0 | 34 | 20 | 0 | 1122 | 1051 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1064 | 0 | 26 | 23 | 0 | 1175 | 1113 |
| 13:00 | 14:00 | 1178 | 0 | 28 | 22 | 0 | 1292 | 1228 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1172 | 0 | 12 | 45 | 0 | 1292 | 1229 |
| 18:00 | 19:00 | 1552 | 0 | 9 | 51 | 0 | 1677 | 1612 |
| 19:00 | 20:00 | 861 | 0 | 9 | 18 | 0 | 920 | 888 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---------------------------------------|
| Movimento Contado | |
| 12 > 14 | Av. Dr. Morães Sales em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 264 | 0 | 7 | 6 | 0 | 294 | 277 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 257 | 0 | 6 | 5 | 0 | 282 | 268 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 285 | 0 | 8 | 7 | 0 | 319 | 300 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 258 | 0 | 5 | 5 | 0 | 281 | 268 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 277 | 0 | 5 | 2 | 0 | 294 | 284 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 318 | 0 | 13 | 7 | 0 | 365 | 338 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 290 | 0 | 6 | 8 | 0 | 321 | 304 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 293 | 0 | 4 | 5 | 0 | 313 | 302 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 262 | 0 | 6 | 7 | 0 | 291 | 275 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 332 | 0 | 3 | 13 | 0 | 366 | 348 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 283 | 0 | 2 | 12 | 0 | 312 | 297 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 295 | 0 | 1 | 13 | 0 | 324 | 309 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 316 | 0 | 4 | 10 | 0 | 346 | 330 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 319 | 0 | 2 | 7 | 0 | 338 | 328 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 264 | 0 | 1 | 12 | 0 | 291 | 277 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 653 | 0 | 2 | 22 | 0 | 702 | 677 |
| 7:00 | 7:15 | 312 | 0 | 2 | 13 | 0 | 343 | 327 | 19:00 | 19:15 | 228 | 0 | 0 | 5 | 0 | 238 | 233 |
| 7:15 | 7:30 | 372 | 0 | 1 | 8 | 0 | 391 | 381 | 19:15 | 19:30 | 253 | 0 | 2 | 6 | 0 | 270 | 261 |
| 7:30 | 7:45 | 466 | 0 | 8 | 10 | 0 | 506 | 484 | 19:30 | 19:45 | 183 | 0 | 4 | 3 | 0 | 199 | 190 |
| 7:45 | 8:00 | 367 | 0 | 6 | 18 | 0 | 418 | 391 | 19:45 | 20:00 | 197 | 0 | 3 | 4 | 0 | 213 | 204 |
| 8:00 | 8:15 | 383 | 0 | 10 | 13 | 0 | 434 | 406 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 358 | 0 | 6 | 6 | 0 | 385 | 370 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 326 | 0 | 4 | 11 | 0 | 358 | 341 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 357 | 0 | 6 | 9 | 0 | 390 | 372 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 321 | 0 | 6 | 8 | 0 | 352 | 335 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 301 | 0 | 10 | 6 | 0 | 338 | 317 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 286 | 0 | 13 | 8 | 0 | 335 | 307 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 283 | 0 | 9 | 6 | 0 | 318 | 298 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 269 | 0 | 5 | 5 | 0 | 292 | 279 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 229 | 0 | 10 | 4 | 0 | 262 | 243 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 245 | 0 | 10 | 7 | 0 | 284 | 262 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 254 | 0 | 9 | 4 | 0 | 285 | 267 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

13 > 11 Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 651 | 0 | 9 | 5 | 0 | 684 | 665 |
| 8:00 | 9:00 | 744 | 0 | 8 | 1 | 0 | 766 | 753 |
| 9:00 | 10:00 | 470 | 0 | 6 | 0 | 0 | 485 | 476 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 334 | 0 | 10 | 2 | 0 | 363 | 346 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 407 | 0 | 4 | 0 | 0 | 417 | 411 |
| 13:00 | 14:00 | 411 | 0 | 4 | 2 | 0 | 425 | 417 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 428 | 0 | 4 | 0 | 0 | 438 | 432 |
| 18:00 | 19:00 | 414 | 0 | 1 | 3 | 0 | 423 | 418 |
| 19:00 | 20:00 | 252 | 0 | 0 | 5 | 0 | 262 | 257 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 11
Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 95 | 0 | 0 | 0 | 0 | 95 | | 95 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 98 | 0 | 0 | 0 | 0 | 98 | 417 | 98 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 102 | 0 | 2 | 0 | 0 | 107 | | 104 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 112 | 0 | 2 | 0 | 0 | 117 | | 114 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 109 | 0 | 3 | 0 | 0 | 117 | 425 | 112 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 91 | 0 | 0 | 0 | 0 | 91 | | 91 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 107 | 0 | 1 | 1 | 0 | 112 | | 109 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 104 | 0 | 0 | 1 | 0 | 106 | | 105 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 121 | 0 | 1 | 0 | 0 | 124 | 438 | 122 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 84 | 0 | 1 | 0 | 0 | 87 | | 85 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 116 | 0 | 1 | 0 | 0 | 119 | | 117 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 107 | 0 | 1 | 0 | 0 | 110 | | 108 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 123 | 0 | 0 | 0 | 0 | 123 | 423 | 123 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 95 | 0 | 0 | 2 | 0 | 99 | | 97 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 106 | 0 | 1 | 1 | 0 | 111 | | 108 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 90 | 0 | 0 | 0 | 0 | 90 | | 90 | |
| 7:00 | 7:15 | 114 | 0 | 1 | 1 | 0 | 119 | | 116 | 19:00 | 19:15 | 70 | 0 | 0 | 2 | 0 | 74 | 262 | 72 | |
| 7:15 | 7:30 | 144 | 0 | 2 | 3 | 0 | 155 | 684 | 149 | 19:15 | 19:30 | 74 | 0 | 0 | 1 | 0 | 76 | | 75 | |
| 7:30 | 7:45 | 174 | 0 | 6 | 1 | 0 | 191 | | 181 | 19:30 | 19:45 | 60 | 0 | 0 | 0 | 0 | 60 | | 60 | |
| 7:45 | 8:00 | 219 | 0 | 0 | 0 | 0 | 219 | | 219 | 19:45 | 20:00 | 48 | 0 | 0 | 2 | 0 | 52 | | 50 | |
| 8:00 | 8:15 | 188 | 0 | 2 | 1 | 0 | 195 | | 191 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 179 | 0 | 1 | 0 | 0 | 182 | 766 | 180 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 177 | 0 | 4 | 0 | 0 | 187 | | 181 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 200 | 0 | 1 | 0 | 0 | 203 | | 201 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 145 | 0 | 1 | 0 | 0 | 148 | | 146 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 106 | 0 | 0 | 0 | 0 | 106 | 485 | 106 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:30 | 9:45 | 100 | 0 | 3 | 0 | 0 | 108 | | 103 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:45 | 10:00 | 119 | 0 | 2 | 0 | 0 | 124 | | 121 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 73 | 0 | 4 | 0 | 0 | 83 | | 77 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 72 | 0 | 3 | 0 | 0 | 80 | 363 | 75 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:30 | 11:45 | 85 | 0 | 2 | 0 | 0 | 90 | | 87 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:45 | 12:00 | 104 | 0 | 1 | 2 | 0 | 111 | | 107 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

Movimento Contado

13 > 12 Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 69 | 0 | 2 | 2 | 0 | 78 | 73 |
| 8:00 | 9:00 | 56 | 0 | 1 | 0 | 0 | 59 | 57 |
| 9:00 | 10:00 | 61 | 0 | 6 | 1 | 0 | 78 | 68 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 75 | 0 | 4 | 1 | 0 | 87 | 80 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 87 | 0 | 3 | 0 | 0 | 95 | 90 |
| 13:00 | 14:00 | 74 | 0 | 3 | 2 | 0 | 86 | 79 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 80 | 0 | 0 | 0 | 0 | 80 | 80 |
| 18:00 | 19:00 | 102 | 0 | 0 | 0 | 0 | 102 | 102 |
| 19:00 | 20:00 | 91 | 0 | 1 | 1 | 0 | 96 | 93 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 12
Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 15 | 0 | 0 | 0 | 0 | 15 | | 15 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 26 | 0 | 0 | 0 | 0 | 26 | 95 | 26 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 23 | 0 | 3 | 0 | 0 | 31 | | 26 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 23 | 0 | 0 | 0 | 0 | 23 | | 23 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 21 | 0 | 2 | 0 | 0 | 26 | 86 | 23 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 20 | 0 | 0 | 1 | 0 | 22 | | 21 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 19 | 0 | 0 | 1 | 0 | 21 | | 20 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 14 | 0 | 1 | 0 | 0 | 17 | | 15 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 20 | 0 | 0 | 0 | 0 | 20 | 80 | 20 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 18 | 0 | 0 | 0 | 0 | 18 | | 18 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 24 | 0 | 0 | 0 | 0 | 24 | | 24 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 18 | 0 | 0 | 0 | 0 | 18 | | 18 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 27 | 0 | 0 | 0 | 0 | 27 | 102 | 27 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 36 | 0 | 0 | 0 | 0 | 36 | | 36 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 17 | 0 | 0 | 0 | 0 | 17 | | 17 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 22 | 0 | 0 | 0 | 0 | 22 | | 22 | |
| 7:00 | 7:15 | 25 | 0 | 0 | 0 | 0 | 25 | | 25 | 19:00 | 19:15 | 33 | 0 | 0 | 0 | 0 | 33 | 96 | 33 | |
| 7:15 | 7:30 | 18 | 0 | 1 | 0 | 0 | 21 | 78 | 19 | 19:15 | 19:30 | 20 | 0 | 0 | 1 | 0 | 22 | | 21 | |
| 7:30 | 7:45 | 12 | 0 | 1 | 2 | 0 | 19 | | 15 | 19:30 | 19:45 | 24 | 0 | 1 | 0 | 0 | 27 | | 25 | |
| 7:45 | 8:00 | 14 | 0 | 0 | 0 | 0 | 14 | | 14 | 19:45 | 20:00 | 14 | 0 | 0 | 0 | 0 | 14 | | 14 | |
| 8:00 | 8:15 | 8 | 0 | 0 | 0 | 0 | 8 | | 8 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 18 | 0 | 0 | 0 | 0 | 18 | 59 | 18 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 17 | 0 | 0 | 0 | 0 | 17 | | 17 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 13 | 0 | 1 | 0 | 0 | 16 | | 14 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 11 | 0 | 3 | 1 | 0 | 21 | | 15 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 18 | 0 | 1 | 0 | 0 | 21 | 78 | 19 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:30 | 9:45 | 18 | 0 | 1 | 0 | 0 | 21 | | 19 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:45 | 10:00 | 14 | 0 | 1 | 0 | 0 | 17 | | 15 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 12 | 0 | 1 | 0 | 0 | 15 | | 13 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 20 | 0 | 1 | 1 | 0 | 25 | 87 | 22 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:30 | 11:45 | 19 | 0 | 1 | 0 | 0 | 22 | | 20 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:45 | 12:00 | 24 | 0 | 1 | 0 | 0 | 27 | | 25 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

Movimento Contado

13 > 14 Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 311 | 0 | 2 | 0 | 0 | 316 | 313 |
| 8:00 | 9:00 | 217 | 0 | 1 | 0 | 0 | 220 | 218 |
| 9:00 | 10:00 | 193 | 0 | 3 | 0 | 0 | 201 | 196 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 170 | 0 | 8 | 1 | 0 | 192 | 179 |

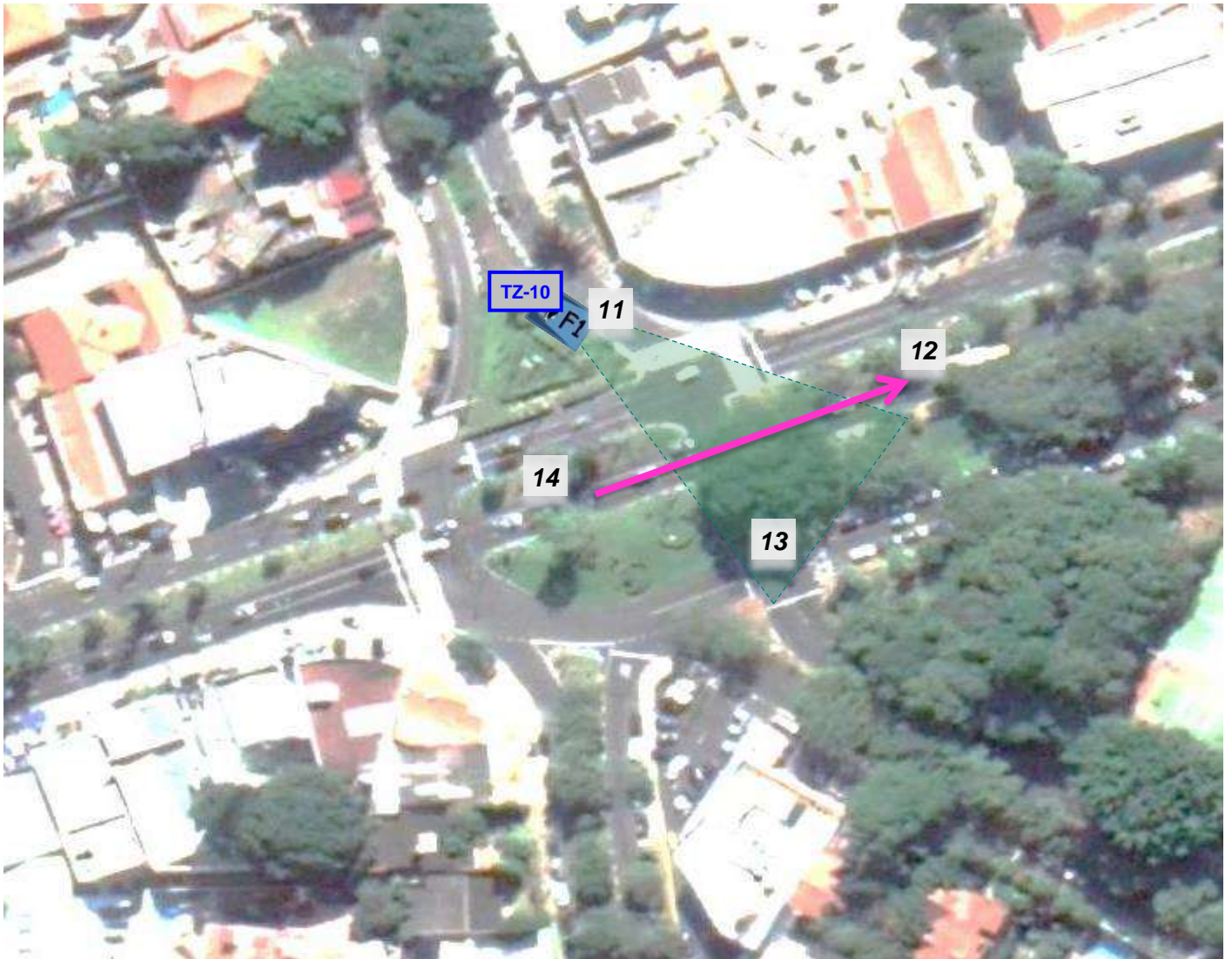
| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 222 | 0 | 3 | 2 | 0 | 234 | 227 |
| 13:00 | 14:00 | 200 | 0 | 9 | 1 | 0 | 225 | 210 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 147 | 0 | 1 | 0 | 0 | 150 | 148 |
| 18:00 | 19:00 | 144 | 0 | 0 | 0 | 0 | 144 | 144 |
| 19:00 | 20:00 | 196 | 0 | 0 | 3 | 0 | 202 | 199 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 14
Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 58 | 0 | 1 | 0 | 0 | 61 | | 59 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 48 | 0 | 1 | 0 | 0 | 51 | 234 | 49 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 63 | 0 | 0 | 0 | 0 | 63 | | 63 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 53 | 0 | 1 | 2 | 0 | 60 | | 56 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 68 | 0 | 2 | 0 | 0 | 73 | 225 | 70 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 40 | 0 | 1 | 0 | 0 | 43 | | 41 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 43 | 0 | 1 | 1 | 0 | 48 | | 45 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 49 | 0 | 5 | 0 | 0 | 62 | | 54 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 42 | 0 | 1 | 0 | 0 | 45 | 150 | 43 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 34 | 0 | 0 | 0 | 0 | 34 | | 34 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 45 | 0 | 0 | 0 | 0 | 45 | | 45 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 26 | 0 | 0 | 0 | 0 | 26 | | 26 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 35 | 0 | 0 | 0 | 0 | 35 | 144 | 35 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 27 | 0 | 0 | 0 | 0 | 27 | | 27 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 39 | 0 | 0 | 0 | 0 | 39 | | 39 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 43 | 0 | 0 | 0 | 0 | 43 | | 43 | |
| 7:00 | 7:15 | 79 | 0 | 0 | 0 | 0 | 79 | | 79 | 19:00 | 19:15 | 62 | 0 | 0 | 2 | 0 | 66 | 202 | 64 | |
| 7:15 | 7:30 | 92 | 0 | 1 | 0 | 0 | 95 | 316 | 93 | 19:15 | 19:30 | 36 | 0 | 0 | 1 | 0 | 38 | | 37 | |
| 7:30 | 7:45 | 69 | 0 | 1 | 0 | 0 | 72 | | 70 | 19:30 | 19:45 | 54 | 0 | 0 | 0 | 0 | 54 | | 54 | |
| 7:45 | 8:00 | 71 | 0 | 0 | 0 | 0 | 71 | | 71 | 19:45 | 20:00 | 44 | 0 | 0 | 0 | 0 | 44 | | 44 | |
| 8:00 | 8:15 | 52 | 0 | 0 | 0 | 0 | 52 | | 52 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 61 | 0 | 0 | 0 | 0 | 61 | 220 | 61 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 52 | 0 | 0 | 0 | 0 | 52 | | 52 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 52 | 0 | 1 | 0 | 0 | 55 | | 53 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 54 | 0 | 0 | 0 | 0 | 54 | | 54 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 43 | 0 | 0 | 0 | 0 | 43 | 201 | 43 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:30 | 9:45 | 57 | 0 | 1 | 0 | 0 | 60 | | 58 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:45 | 10:00 | 39 | 0 | 2 | 0 | 0 | 44 | | 41 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 41 | 0 | 2 | 0 | 0 | 46 | | 43 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 29 | 0 | 3 | 0 | 0 | 37 | 192 | 32 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:30 | 11:45 | 44 | 0 | 0 | 0 | 0 | 44 | | 44 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:45 | 12:00 | 56 | 0 | 3 | 1 | 0 | 66 | | 60 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

Movimento Contado

14 > 12 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|------|---|-------|-----|---|------|------|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1574 | 0 | 34 | 53 | 0 | 1765 | 1661 |
| 8:00 | 9:00 | 1402 | 0 | 41 | 39 | 0 | 1583 | 1482 |
| 9:00 | 10:00 | 1199 | 0 | 46 | 29 | 0 | 1372 | 1274 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1220 | 0 | 38 | 24 | 0 | 1363 | 1282 |

| Período Tarde | | | | | | | | |
|----------------|-------|------|---|-------|-----|---|------|------|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1650 | 0 | 27 | 28 | 0 | 1774 | 1705 |
| 13:00 | 14:00 | 1352 | 0 | 26 | 23 | 0 | 1463 | 1401 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1712 | 0 | 14 | 36 | 0 | 1819 | 1762 |
| 18:00 | 19:00 | 1720 | 0 | 11 | 46 | 0 | 1840 | 1777 |
| 19:00 | 20:00 | 1335 | 0 | 13 | 31 | 0 | 1430 | 1379 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---------------------------------------|
| Movimento Contado | |
| 14 > 12 | Av. Dr. Morães Sales em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|------|----------------|-------|-----|---|-------|-----|---|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 397 | 0 | 5 | 3 | 0 | 416 | 405 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 408 | 0 | 9 | 10 | 0 | 451 | 427 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 377 | 0 | 6 | 8 | 0 | 408 | 391 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 468 | 0 | 7 | 7 | 0 | 500 | 482 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 347 | 0 | 7 | 5 | 0 | 375 | 359 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 370 | 0 | 5 | 5 | 0 | 393 | 380 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 298 | 0 | 8 | 5 | 0 | 328 | 311 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 337 | 0 | 6 | 8 | 0 | 368 | 351 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 406 | 0 | 5 | 6 | 0 | 431 | 417 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 485 | 0 | 3 | 9 | 0 | 511 | 497 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 399 | 0 | 3 | 9 | 0 | 425 | 411 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 422 | 0 | 3 | 12 | 0 | 454 | 437 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 459 | 0 | 5 | 11 | 0 | 494 | 475 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 447 | 0 | 3 | 11 | 0 | 477 | 461 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 429 | 0 | 2 | 12 | 0 | 458 | 443 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 385 | 0 | 1 | 12 | 0 | 412 | 398 | |
| 7:00 | 7:15 | 362 | 0 | 6 | 14 | 0 | 405 | 382 | 1765 | 19:00 | 19:15 | 371 | 0 | 4 | 9 | 0 | 399 | 384 | |
| 7:15 | 7:30 | 375 | 0 | 8 | 11 | 0 | 417 | 394 | 1765 | 19:15 | 19:30 | 376 | 0 | 1 | 8 | 0 | 395 | 385 | |
| 7:30 | 7:45 | 422 | 0 | 9 | 17 | 0 | 479 | 448 | 1765 | 19:30 | 19:45 | 293 | 0 | 5 | 7 | 0 | 320 | 305 | |
| 7:45 | 8:00 | 415 | 0 | 11 | 11 | 0 | 465 | 437 | 1765 | 19:45 | 20:00 | 295 | 0 | 3 | 7 | 0 | 317 | 305 | |
| 8:00 | 8:15 | 379 | 0 | 10 | 10 | 0 | 424 | 399 | 1583 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 349 | 0 | 8 | 10 | 0 | 389 | 367 | 1583 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 335 | 0 | 9 | 13 | 0 | 384 | 357 | 1583 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 339 | 0 | 14 | 6 | 0 | 386 | 359 | 1583 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 345 | 0 | 15 | 12 | 0 | 407 | 372 | 1372 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 257 | 0 | 10 | 4 | 0 | 290 | 271 | 1372 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 300 | 0 | 12 | 8 | 0 | 346 | 320 | 1372 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 297 | 0 | 9 | 5 | 0 | 330 | 311 | 1372 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 327 | 0 | 15 | 6 | 0 | 377 | 348 | 1363 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 289 | 0 | 12 | 7 | 0 | 333 | 308 | 1363 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 287 | 0 | 4 | 5 | 0 | 307 | 296 | 1363 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 317 | 0 | 7 | 6 | 0 | 347 | 330 | 1363 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

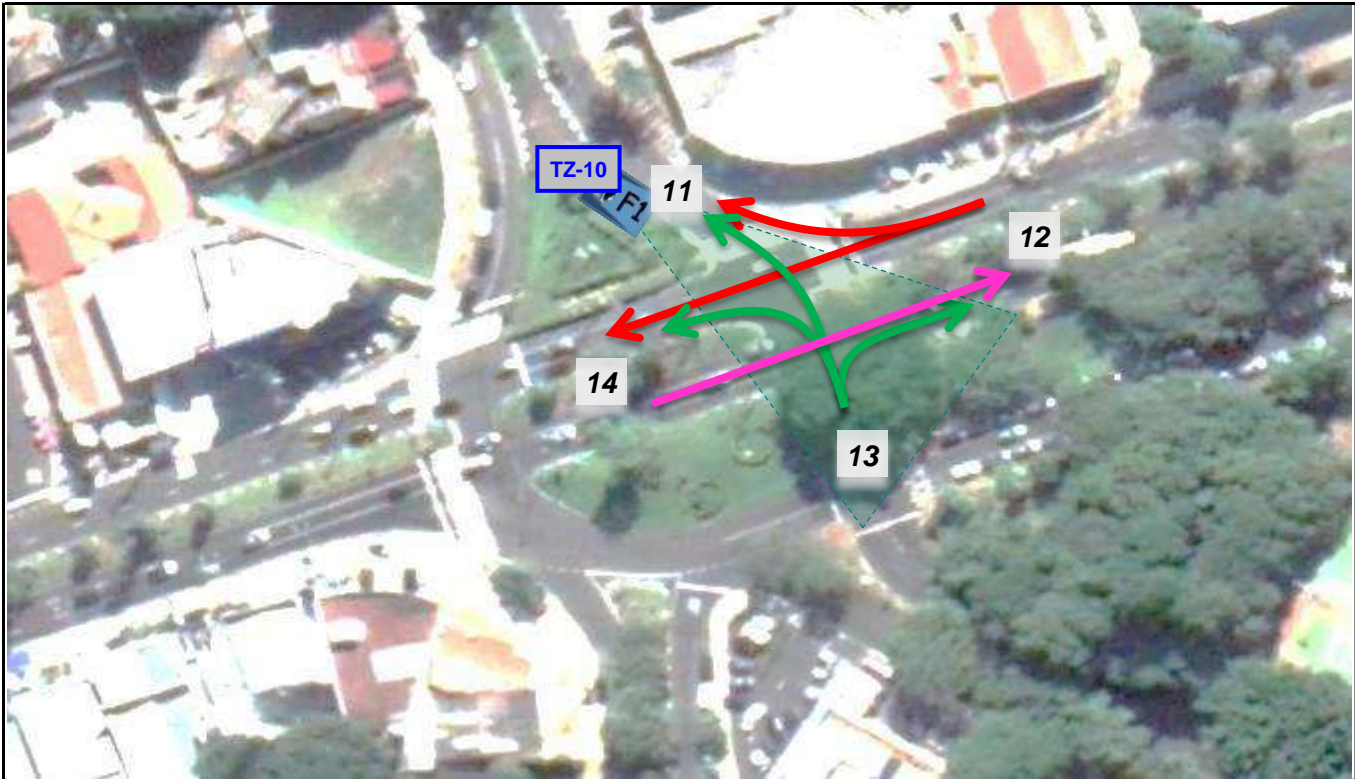
002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado

Ref.: RT-AAP.001-3J21-002_20191023_A

Campinas - SP

Novembro de 2019

Croquis **002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019**



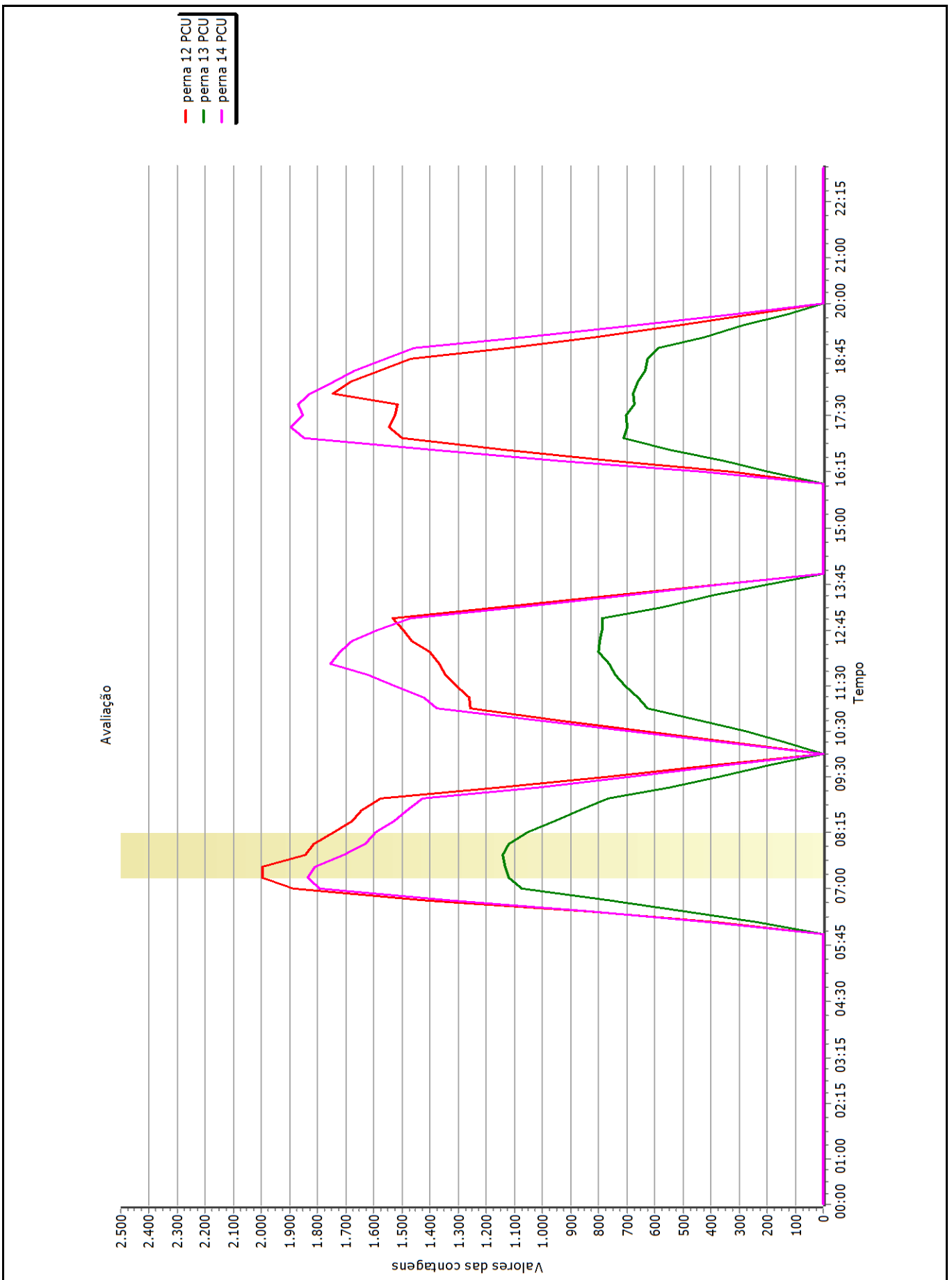
Vídeos



Movimentos Contados

- 12 > 11 Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado
- 12 > 14 Av. Dr. Morães Sales em frente
- 13 > 11 Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado
- 13 > 12 Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales
- 13 > 14 Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales
- 14 > 12 Av. Dr. Morães Sales em frente

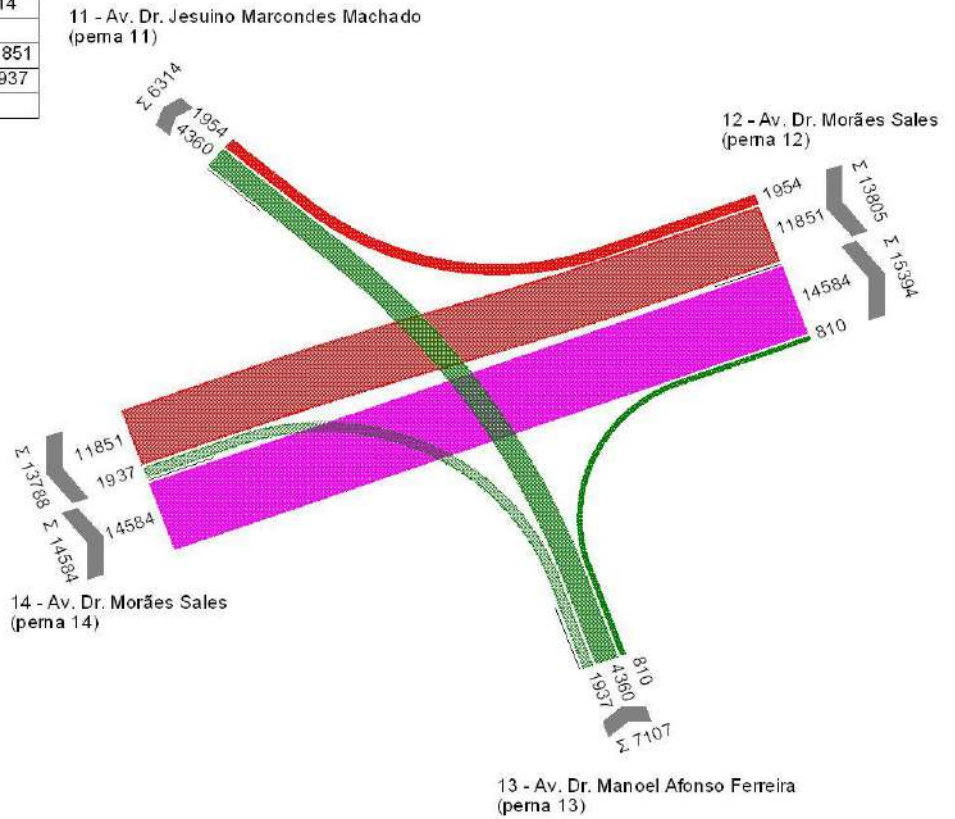
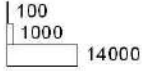
Perfil Horário 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019



Volume Total Diário

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Total On the basis of a time period 23.10.2019 00:00 - 24.10.2019 00:00
 35496 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|------|-------|----|-------|
| 11 | | | | |
| 12 | 1954 | | | 11851 |
| 13 | 4360 | 810 | | 1937 |
| 14 | | 14584 | | |



Volume Hora Pico

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Hora de pico 07:15 - 08:15
 On the basis of a time period 23.10.2019 00:00 - 24.10.2019 00:00
 4953 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 265 | | | 1734 |
| 13 | 752 | 67 | | 299 |
| 14 | | 1836 | | |

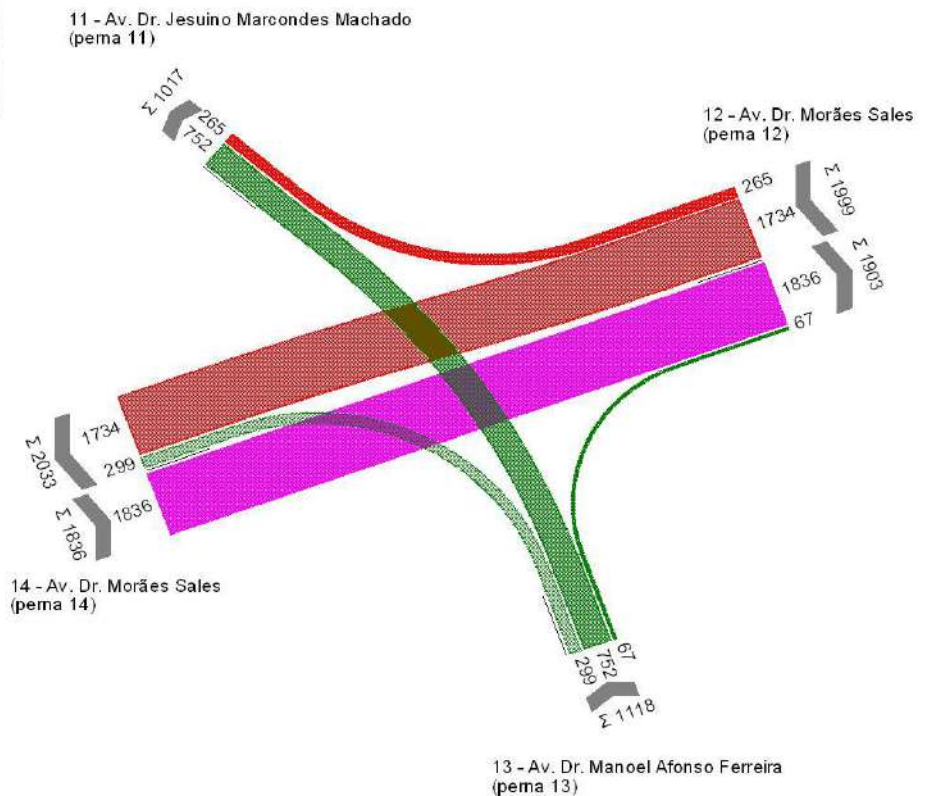
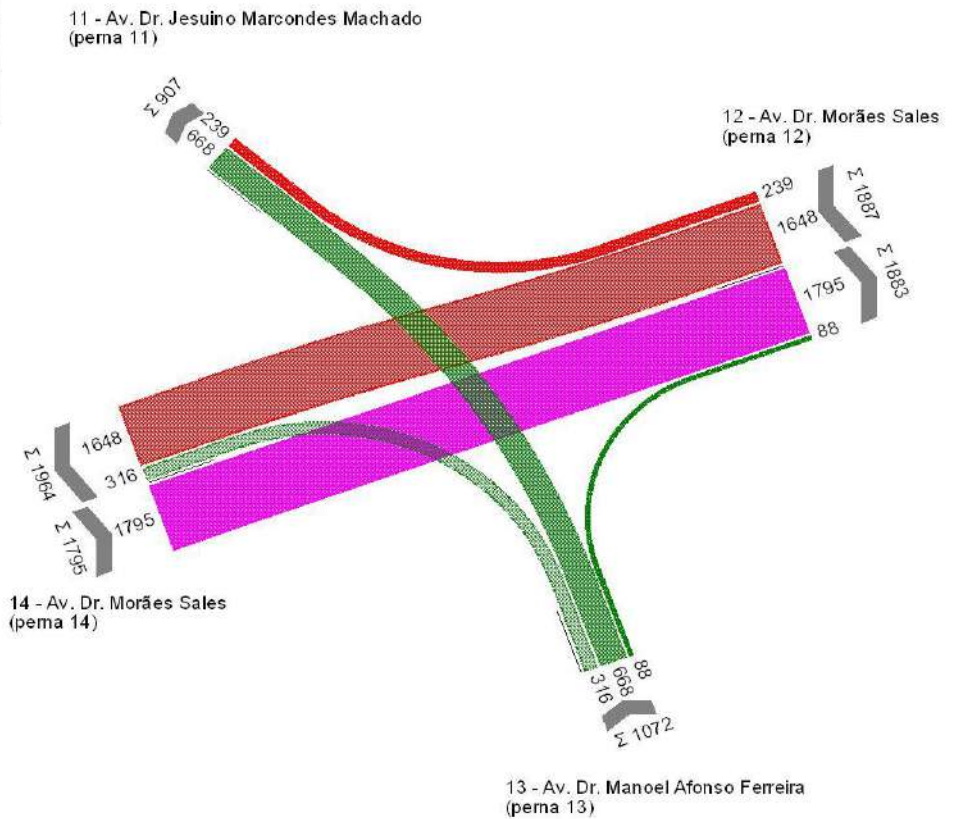


Diagrama de Fluxos **002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019**

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 23.10.2019 07:00 - 23.10.2019 08:00
 4754 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 239 | | | 1648 |
| 13 | 668 | 88 | | 316 |
| 14 | | 1795 | | |

100
 500
 1000



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 23.10.2019 08:00 - 23.10.2019 09:00
 4567 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 262 | | | 1554 |
| 13 | 794 | 77 | | 250 |
| 14 | | 1630 | | |

100
 500
 1000

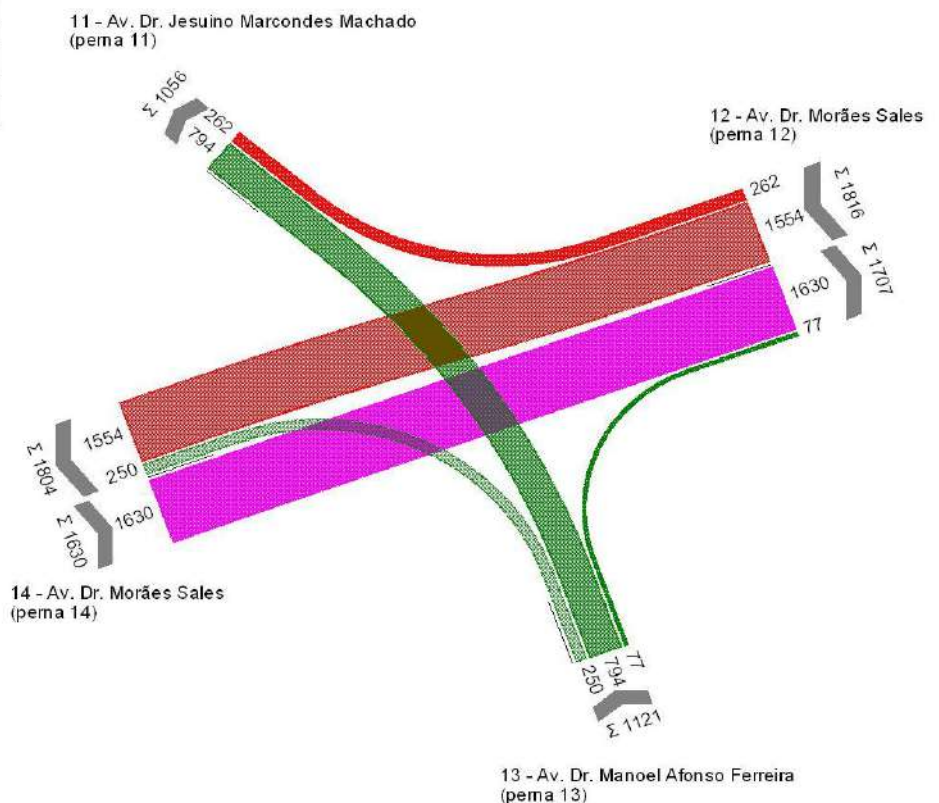


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 23.10.2019 09:00 - 23.10.2019 10:00
 3770 PCU

| De\Para | 11 | 12 | 13 | 14 |
|---------|-----|------|----|------|
| 11 | | | | |
| 12 | 215 | | | 1362 |
| 13 | 492 | 70 | | 204 |
| 14 | | 1427 | | |

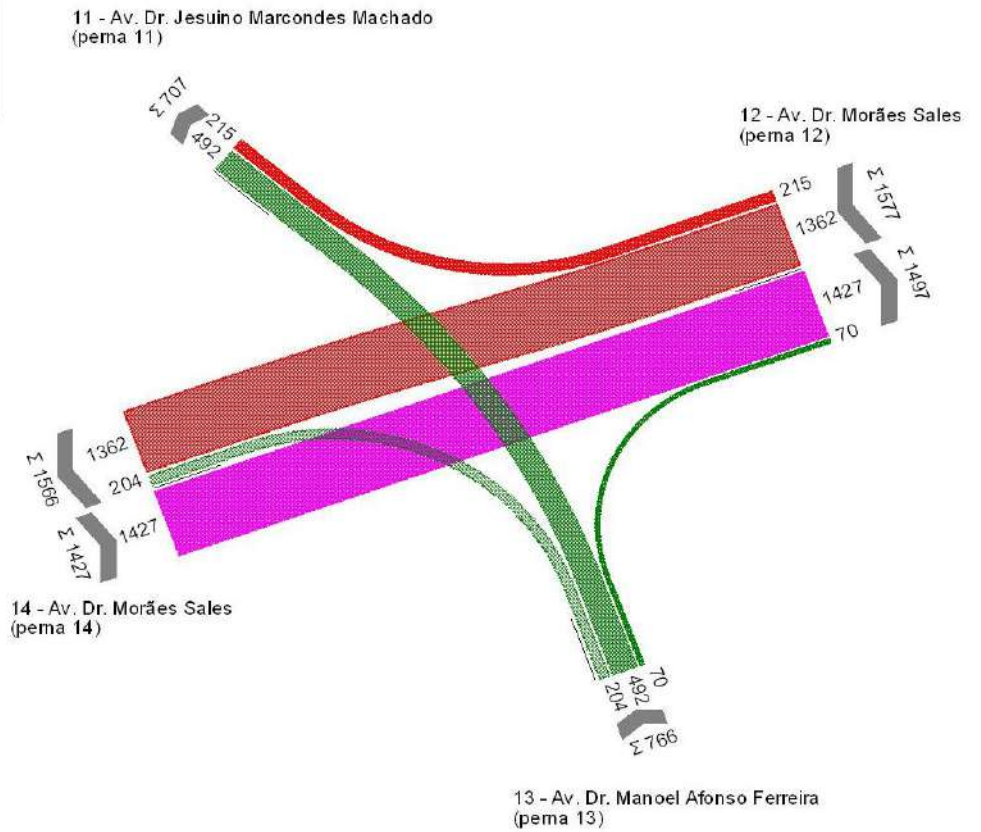
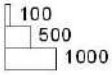
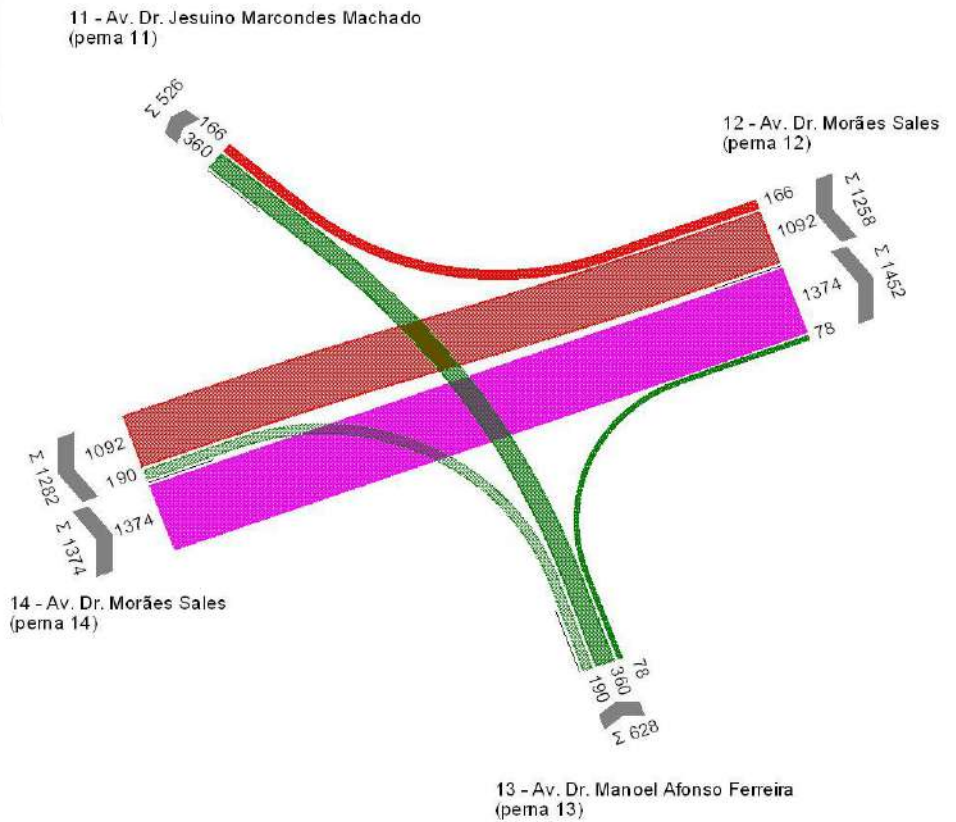
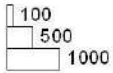


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 23.10.2019 11:00 - 23.10.2019 12:00
 3260 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 166 | | | 1092 |
| 13 | 360 | 78 | | 190 |
| 14 | | 1374 | | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 23.10.2019 12:00 - 23.10.2019 13:00
 3883 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 206 | | | 1160 |
| 13 | 433 | 102 | | 226 |
| 14 | | 1756 | | |

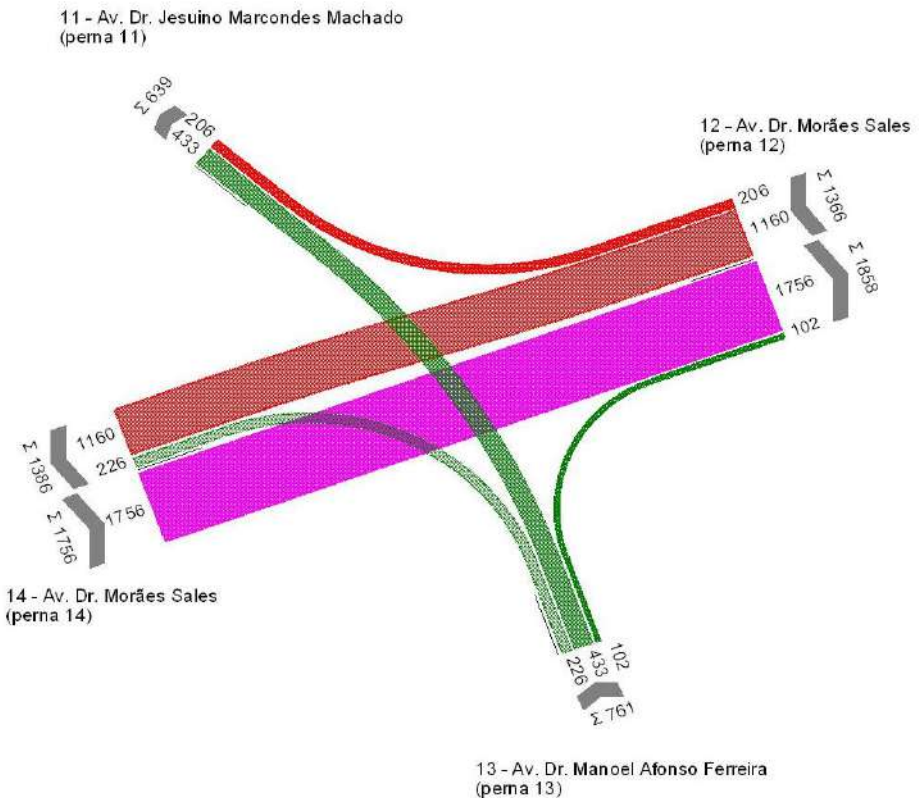
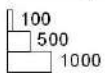


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 23.10.2019 13:00 - 23.10.2019 14:00
 3791 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 238 | | | 1296 |
| 13 | 450 | 96 | | 241 |
| 14 | | 1470 | | |

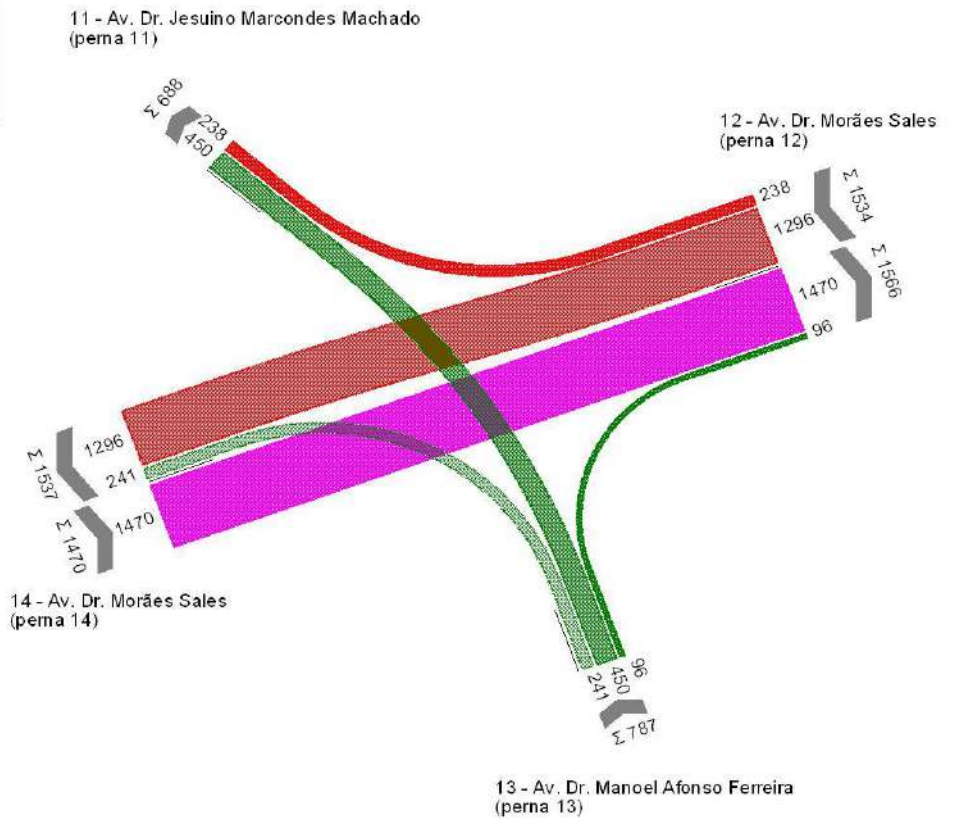
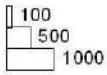
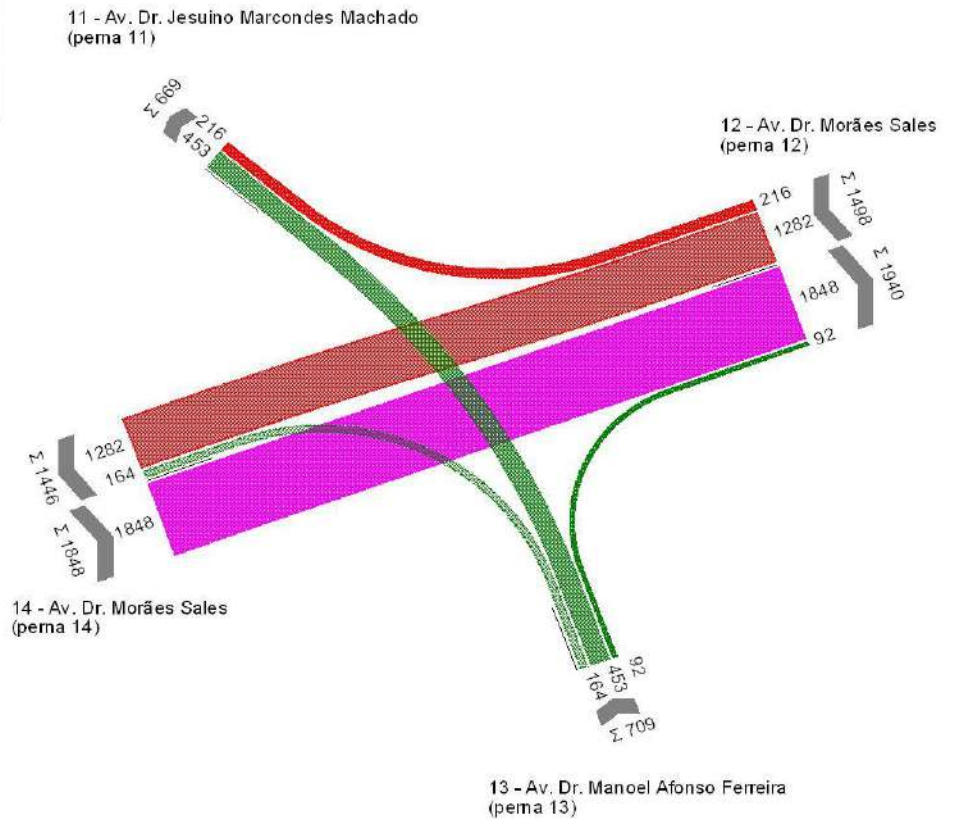
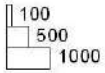


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 23.10.2019 17:00 - 23.10.2019 18:00
 4055 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 216 | | | 1282 |
| 13 | 453 | 92 | | 164 |
| 14 | | 1848 | | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 23.10.2019 18:00 - 23.10.2019 19:00
 4254 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 217 | | | 1530 |
| 13 | 434 | 106 | | 139 |
| 14 | | 1828 | | |

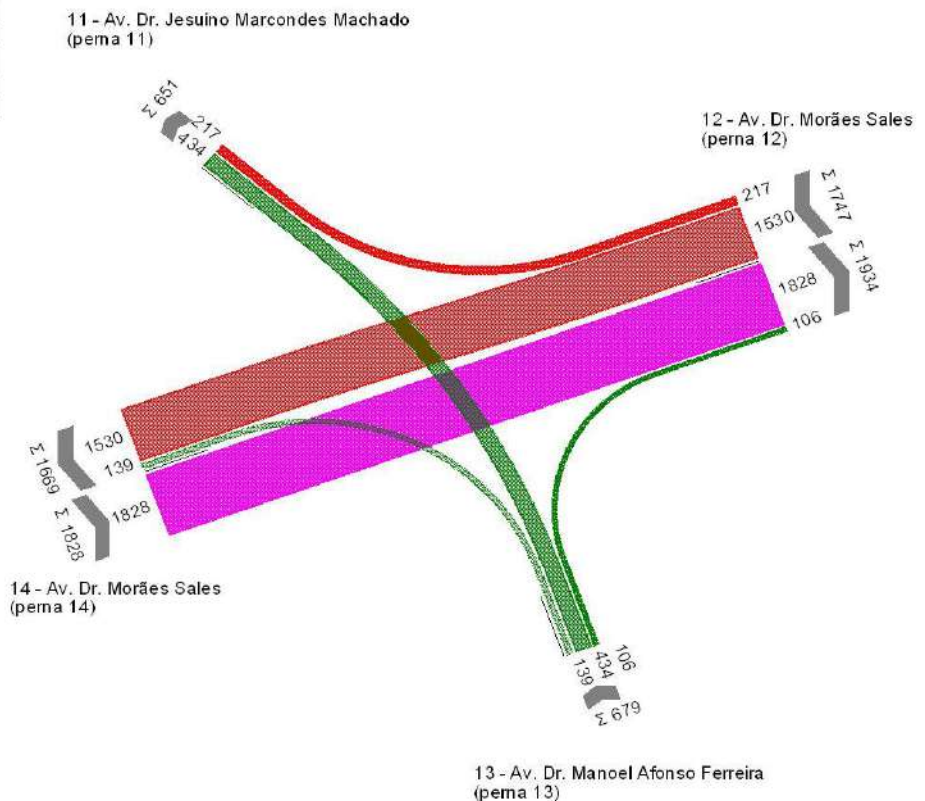
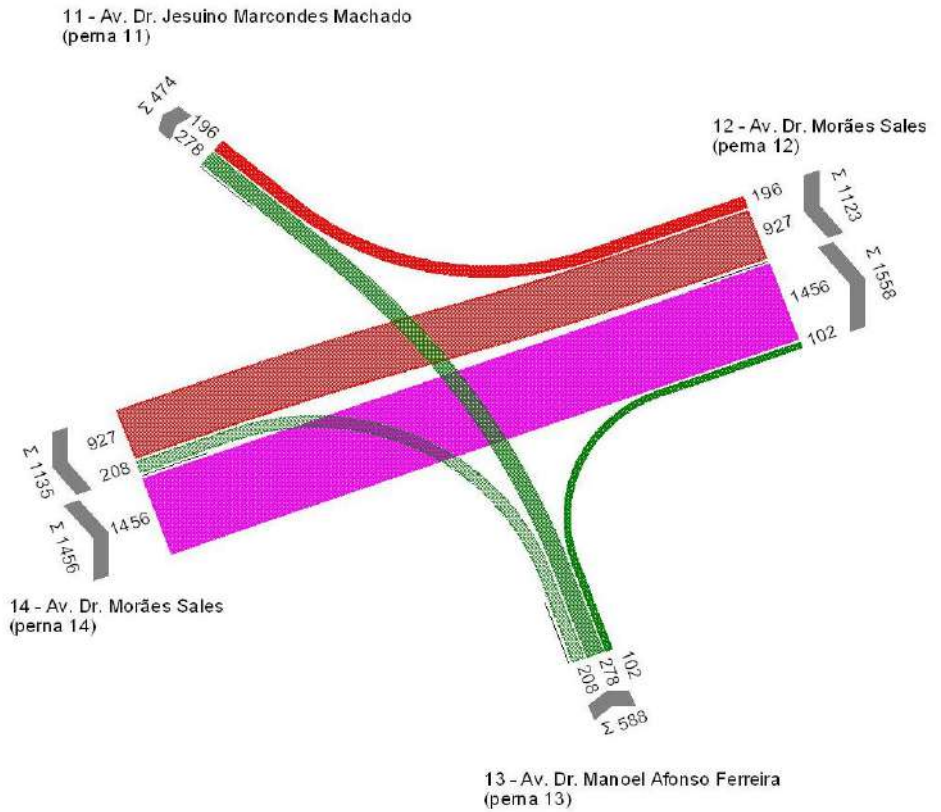
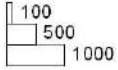


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 23.10.2019 19:00 - 23.10.2019 20:00
 3167 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|-----|
| 11 | | | | |
| 12 | 196 | | | 927 |
| 13 | 278 | 102 | | 208 |
| 14 | | 1456 | | |



PCU

002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 23/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

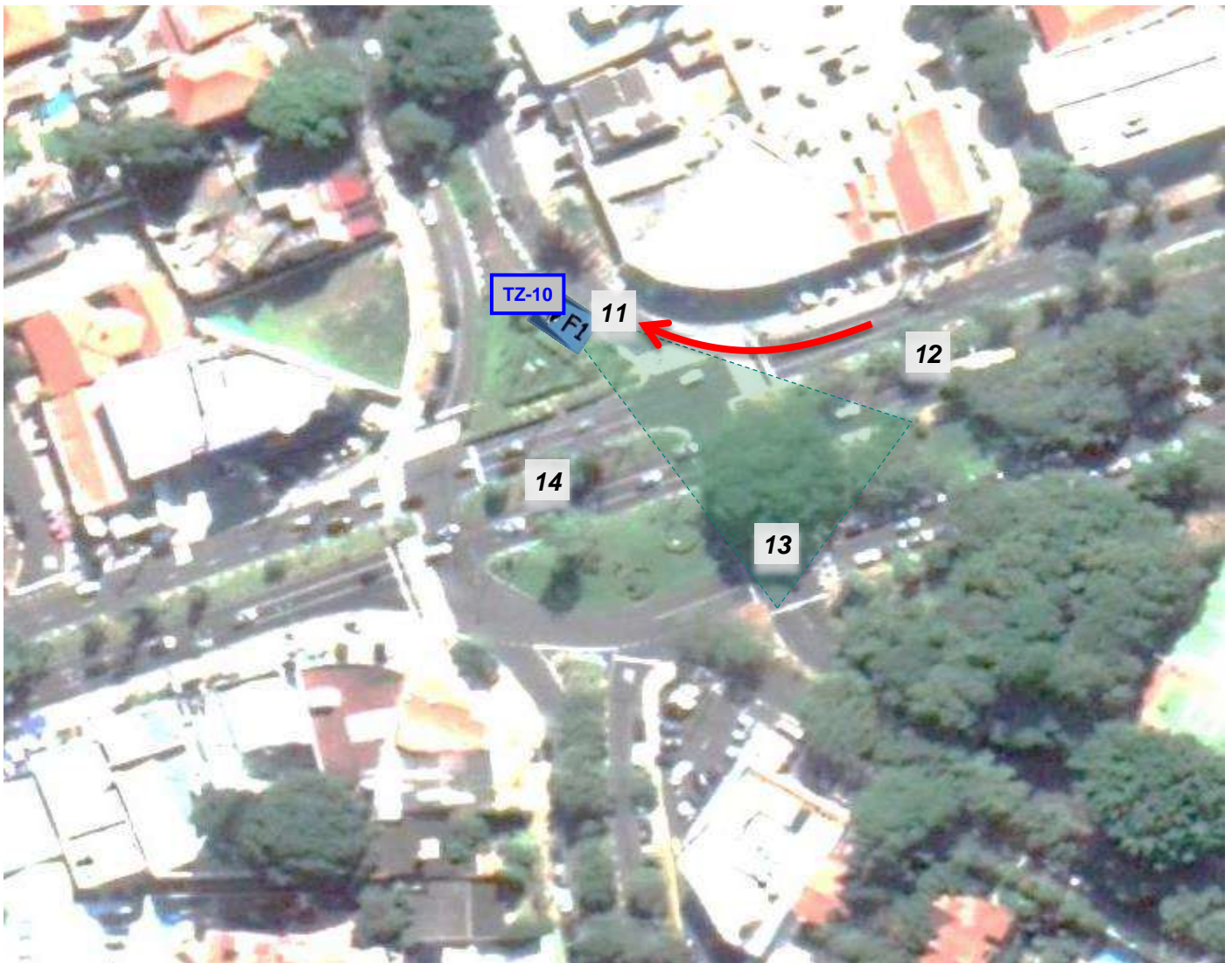
- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

12 > 11 Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 234 | 0 | 2 | 0 | 0 | 239 | 236 |
| 8:00 | 9:00 | 252 | 0 | 4 | 0 | 0 | 262 | 256 |
| 9:00 | 10:00 | 208 | 0 | 2 | 1 | 0 | 215 | 211 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 159 | 0 | 2 | 1 | 0 | 166 | 162 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 201 | 0 | 2 | 0 | 0 | 206 | 203 |
| 13:00 | 14:00 | 228 | 0 | 3 | 1 | 0 | 238 | 232 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 206 | 0 | 4 | 0 | 0 | 216 | 210 |
| 18:00 | 19:00 | 207 | 0 | 4 | 0 | 0 | 217 | 211 |
| 19:00 | 20:00 | 193 | 0 | 1 | 0 | 0 | 196 | 194 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---|
| Movimento Contado | |
| 12 > 11 | Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 47 | 0 | 0 | 0 | 0 | 47 | | 47 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 53 | 0 | 1 | 0 | 0 | 56 | 206 | 54 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 49 | 0 | 0 | 0 | 0 | 49 | | 49 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 52 | 0 | 1 | 0 | 0 | 55 | | 53 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 55 | 0 | 1 | 0 | 0 | 58 | 238 | 56 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 57 | 0 | 0 | 0 | 0 | 57 | | 57 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 57 | 0 | 1 | 0 | 0 | 60 | | 58 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 59 | 0 | 1 | 1 | 0 | 64 | | 61 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 51 | 0 | 1 | 0 | 0 | 54 | 216 | 52 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 53 | 0 | 1 | 0 | 0 | 56 | | 54 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 55 | 0 | 1 | 0 | 0 | 58 | | 56 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 47 | 0 | 1 | 0 | 0 | 50 | | 48 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 45 | 0 | 0 | 0 | 0 | 45 | 217 | 45 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 49 | 0 | 2 | 0 | 0 | 54 | | 51 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 55 | 0 | 1 | 0 | 0 | 58 | | 56 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 58 | 0 | 1 | 0 | 0 | 61 | | 59 |
| 7:00 | 7:15 | 47 | 0 | 0 | 0 | 0 | 47 | | 47 | 19:00 | 19:15 | 50 | 0 | 0 | 0 | 0 | 50 | 196 | 50 |
| 7:15 | 7:30 | 66 | 0 | 2 | 0 | 0 | 71 | 239 | 68 | 19:15 | 19:30 | 46 | 0 | 0 | 0 | 0 | 46 | | 46 |
| 7:30 | 7:45 | 69 | 0 | 0 | 0 | 0 | 69 | | 69 | 19:30 | 19:45 | 47 | 0 | 1 | 0 | 0 | 50 | | 48 |
| 7:45 | 8:00 | 52 | 0 | 0 | 0 | 0 | 52 | | 52 | 19:45 | 20:00 | 50 | 0 | 0 | 0 | 0 | 50 | | 50 |
| 8:00 | 8:15 | 73 | 0 | 0 | 0 | 0 | 73 | | 73 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 65 | 0 | 3 | 0 | 0 | 73 | 262 | 68 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 56 | 0 | 1 | 0 | 0 | 59 | | 57 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 58 | 0 | 0 | 0 | 0 | 58 | | 58 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 54 | 0 | 0 | 0 | 0 | 54 | | 54 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 50 | 0 | 1 | 0 | 0 | 53 | 215 | 51 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 51 | 0 | 0 | 0 | 0 | 51 | | 51 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 53 | 0 | 1 | 1 | 0 | 58 | | 55 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 30 | 0 | 0 | 0 | 0 | 30 | 166 | 30 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 44 | 0 | 1 | 0 | 0 | 47 | | 45 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 47 | 0 | 0 | 1 | 0 | 49 | | 48 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 38 | 0 | 1 | 0 | 0 | 41 | | 39 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

12 > 14 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1509 | 0 | 17 | 48 | 0 | 1648 | 1574 |
| 8:00 | 9:00 | 1411 | 0 | 22 | 44 | 0 | 1554 | 1477 |
| 9:00 | 10:00 | 1209 | 0 | 38 | 29 | 0 | 1362 | 1276 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 987 | 0 | 26 | 20 | 0 | 1092 | 1033 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1056 | 0 | 29 | 16 | 0 | 1161 | 1101 |
| 13:00 | 14:00 | 1184 | 0 | 27 | 22 | 0 | 1296 | 1233 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1182 | 0 | 5 | 44 | 0 | 1283 | 1231 |
| 18:00 | 19:00 | 1415 | 0 | 6 | 50 | 0 | 1530 | 1471 |
| 19:00 | 20:00 | 856 | 0 | 6 | 28 | 0 | 927 | 890 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---------------------------------------|
| Movimento Contado | |
| 12 > 14 | Av. Dr. Morães Sales em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|------|-----|----------------|-------|-----|---|-------|-----|---|-----|------|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 262 | 0 | 10 | 3 | 0 | 293 | | 275 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 262 | 0 | 9 | 4 | 0 | 293 | 1161 | 275 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 271 | 0 | 5 | 5 | 0 | 294 | | 281 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 261 | 0 | 5 | 4 | 0 | 282 | | 270 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 282 | 0 | 7 | 8 | 0 | 316 | | 297 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 315 | 0 | 11 | 6 | 0 | 355 | 1296 | 332 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 294 | 0 | 4 | 5 | 0 | 314 | | 303 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 293 | 0 | 5 | 3 | 0 | 312 | | 301 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 266 | 0 | 0 | 5 | 0 | 276 | | 271 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 333 | 0 | 1 | 15 | 0 | 366 | 1283 | 349 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 288 | 0 | 2 | 13 | 0 | 319 | | 303 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 295 | 0 | 2 | 11 | 0 | 322 | | 308 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 309 | 0 | 1 | 10 | 0 | 332 | | 320 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 327 | 0 | 1 | 9 | 0 | 348 | 1530 | 337 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 277 | 0 | 3 | 12 | 0 | 309 | | 292 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 502 | 0 | 1 | 19 | 0 | 543 | | 522 |
| 7:00 | 7:15 | 307 | 0 | 1 | 11 | 0 | 332 | | 319 | 19:00 | 19:15 | 243 | 0 | 0 | 10 | 0 | 263 | | 253 |
| 7:15 | 7:30 | 368 | 0 | 2 | 9 | 0 | 391 | 1648 | 379 | 19:15 | 19:30 | 237 | 0 | 1 | 7 | 0 | 254 | 927 | 245 |
| 7:30 | 7:45 | 470 | 0 | 4 | 13 | 0 | 506 | | 487 | 19:30 | 19:45 | 181 | 0 | 4 | 7 | 0 | 205 | | 192 |
| 7:45 | 8:00 | 364 | 0 | 10 | 15 | 0 | 419 | | 389 | 19:45 | 20:00 | 195 | 0 | 1 | 4 | 0 | 206 | | 200 |
| 8:00 | 8:15 | 376 | 0 | 7 | 12 | 0 | 418 | | 395 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:15 | 8:30 | 358 | 0 | 5 | 9 | 0 | 389 | 1554 | 372 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 325 | 0 | 6 | 11 | 0 | 362 | | 342 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 352 | 0 | 4 | 12 | 0 | 386 | | 368 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 328 | 0 | 7 | 9 | 0 | 364 | | 344 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:15 | 9:30 | 307 | 0 | 10 | 5 | 0 | 342 | 1362 | 322 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 292 | 0 | 11 | 8 | 0 | 336 | | 311 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 282 | 0 | 10 | 7 | 0 | 321 | | 299 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 269 | 0 | 11 | 5 | 0 | 307 | | 285 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:15 | 11:30 | 235 | 0 | 6 | 3 | 0 | 256 | 1092 | 244 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 236 | 0 | 3 | 6 | 0 | 256 | | 245 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 247 | 0 | 6 | 6 | 0 | 274 | | 259 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

13 > 11 Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 633 | 0 | 10 | 5 | 0 | 668 | 648 |
| 8:00 | 9:00 | 758 | 0 | 11 | 4 | 0 | 794 | 773 |
| 9:00 | 10:00 | 474 | 0 | 7 | 0 | 0 | 492 | 481 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 334 | 0 | 8 | 3 | 0 | 360 | 345 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 411 | 0 | 8 | 1 | 0 | 433 | 420 |
| 13:00 | 14:00 | 427 | 0 | 6 | 4 | 0 | 450 | 437 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 437 | 0 | 4 | 3 | 0 | 453 | 444 |
| 18:00 | 19:00 | 420 | 0 | 3 | 3 | 0 | 434 | 426 |
| 19:00 | 20:00 | 260 | 0 | 4 | 4 | 0 | 278 | 268 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 11
Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 97 | 0 | 1 | 0 | 0 | 100 | | 98 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 99 | 0 | 2 | 1 | 0 | 106 | 433 | 102 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:30 | 12:45 | 100 | 0 | 3 | 0 | 0 | 108 | | 103 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 115 | 0 | 2 | 0 | 0 | 120 | | 117 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 110 | 0 | 2 | 0 | 0 | 115 | 450 | 112 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 98 | 0 | 3 | 1 | 0 | 108 | | 102 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 110 | 0 | 1 | 2 | 0 | 117 | | 113 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 109 | 0 | 0 | 1 | 0 | 111 | | 110 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 123 | 0 | 0 | 0 | 0 | 123 | 453 | 123 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 98 | 0 | 1 | 0 | 0 | 101 | | 99 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 112 | 0 | 1 | 2 | 0 | 119 | | 115 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 104 | 0 | 2 | 1 | 0 | 111 | | 107 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 121 | 0 | 1 | 0 | 0 | 124 | 434 | 122 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 101 | 0 | 0 | 0 | 0 | 101 | | 101 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 103 | 0 | 1 | 1 | 0 | 108 | | 105 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 95 | 0 | 1 | 2 | 0 | 102 | | 98 | |
| 7:00 | 7:15 | 112 | 0 | 2 | 1 | 0 | 119 | | 115 | 19:00 | 19:15 | 67 | 0 | 1 | 1 | 0 | 72 | | 69 | |
| 7:15 | 7:30 | 135 | 0 | 3 | 2 | 0 | 147 | 668 | 140 | 19:15 | 19:30 | 71 | 0 | 0 | 0 | 0 | 71 | 71 | | |
| 7:30 | 7:45 | 165 | 0 | 4 | 1 | 0 | 177 | | 170 | 19:30 | 19:45 | 70 | 0 | 2 | 2 | 0 | 79 | 74 | | |
| 7:45 | 8:00 | 221 | 0 | 1 | 1 | 0 | 226 | | 223 | 19:45 | 20:00 | 52 | 0 | 1 | 1 | 0 | 57 | 54 | | |
| 8:00 | 8:15 | 198 | 0 | 2 | 0 | 0 | 203 | | 200 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 182 | 0 | 3 | 1 | 0 | 192 | 794 | 186 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 179 | 0 | 4 | 1 | 0 | 191 | | 184 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 199 | 0 | 2 | 2 | 0 | 208 | | 203 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 151 | 0 | 0 | 0 | 0 | 151 | | 151 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 110 | 0 | 2 | 0 | 0 | 115 | 492 | 112 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 98 | 0 | 3 | 0 | 0 | 106 | | 101 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 115 | 0 | 2 | 0 | 0 | 120 | | 117 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 75 | 0 | 3 | 0 | 0 | 83 | 360 | 78 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 73 | 0 | 2 | 1 | 0 | 80 | | 76 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 87 | 0 | 1 | 2 | 0 | 94 | | 90 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 99 | 0 | 2 | 0 | 0 | 104 | | 101 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

13 > 12 Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 86 | 0 | 0 | 1 | 0 | 88 | 87 |
| 8:00 | 9:00 | 65 | 0 | 4 | 1 | 0 | 77 | 70 |
| 9:00 | 10:00 | 57 | 0 | 5 | 0 | 0 | 70 | 62 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 73 | 0 | 1 | 1 | 0 | 78 | 75 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 90 | 0 | 4 | 1 | 0 | 102 | 95 |
| 13:00 | 14:00 | 76 | 0 | 5 | 4 | 0 | 97 | 85 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 92 | 0 | 0 | 0 | 0 | 92 | 92 |
| 18:00 | 19:00 | 102 | 0 | 0 | 2 | 0 | 106 | 104 |
| 19:00 | 20:00 | 92 | 0 | 4 | 0 | 0 | 102 | 96 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 12
Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 16 | 0 | 0 | 0 | 0 | 16 | | 16 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 28 | 0 | 1 | 1 | 0 | 33 | 102 | 30 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 23 | 0 | 2 | 0 | 0 | 28 | | 25 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 23 | 0 | 1 | 0 | 0 | 26 | | 24 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 20 | 0 | 1 | 1 | 0 | 25 | 97 | 22 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 20 | 0 | 0 | 1 | 0 | 22 | | 21 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 19 | 0 | 1 | 1 | 0 | 24 | | 21 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 17 | 0 | 3 | 1 | 0 | 27 | | 21 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 24 | 0 | 0 | 0 | 0 | 24 | 92 | 24 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 22 | 0 | 0 | 0 | 0 | 22 | | 22 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 27 | 0 | 0 | 0 | 0 | 27 | | 27 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 19 | 0 | 0 | 0 | 0 | 19 | | 19 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 26 | 0 | 0 | 1 | 0 | 28 | 106 | 27 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 33 | 0 | 0 | 0 | 0 | 33 | | 33 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 22 | 0 | 0 | 1 | 0 | 24 | | 23 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 21 | 0 | 0 | 0 | 0 | 21 | | 21 |
| 7:00 | 7:15 | 33 | 0 | 0 | 0 | 0 | 33 | | 33 | 19:00 | 19:15 | 28 | 0 | 2 | 0 | 0 | 33 | 102 | 30 |
| 7:15 | 7:30 | 20 | 0 | 0 | 0 | 0 | 20 | 88 | 20 | 19:15 | 19:30 | 22 | 0 | 0 | 0 | 0 | 22 | | 22 |
| 7:30 | 7:45 | 15 | 0 | 0 | 0 | 0 | 15 | | 15 | 19:30 | 19:45 | 22 | 0 | 1 | 0 | 0 | 25 | | 23 |
| 7:45 | 8:00 | 18 | 0 | 0 | 1 | 0 | 20 | | 19 | 19:45 | 20:00 | 20 | 0 | 1 | 0 | 0 | 23 | | 21 |
| 8:00 | 8:15 | 12 | 0 | 0 | 0 | 0 | 12 | | 12 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 17 | 0 | 1 | 0 | 0 | 20 | | 18 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 21 | 0 | 0 | 0 | 0 | 21 | 77 | 21 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 15 | 0 | 3 | 1 | 0 | 25 | | 19 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 9 | 0 | 0 | 0 | 0 | 9 | | 9 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 18 | 0 | 0 | 0 | 0 | 18 | | 18 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 15 | 0 | 2 | 0 | 0 | 20 | 70 | 17 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 15 | 0 | 3 | 0 | 0 | 23 | | 18 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 14 | 0 | 0 | 0 | 0 | 14 | | 14 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 21 | 0 | 0 | 0 | 0 | 21 | 78 | 21 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 18 | 0 | 0 | 1 | 0 | 20 | | 19 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 20 | 0 | 1 | 0 | 0 | 23 | | 21 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

13 > 14 Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 308 | 0 | 3 | 0 | 0 | 316 | 311 |
| 8:00 | 9:00 | 238 | 0 | 4 | 1 | 0 | 250 | 243 |
| 9:00 | 10:00 | 189 | 0 | 6 | 0 | 0 | 204 | 195 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 173 | 0 | 5 | 2 | 0 | 190 | 180 |

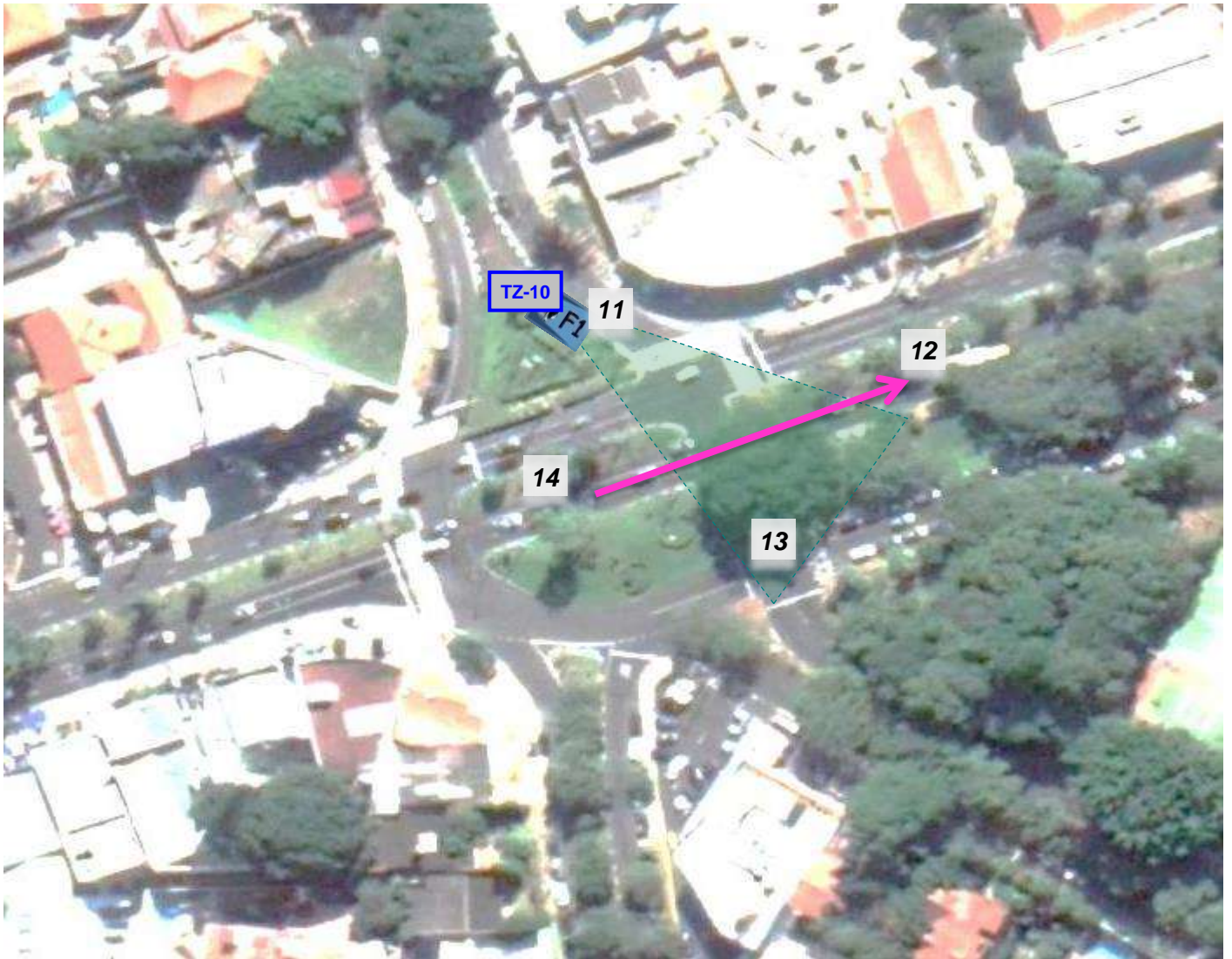
| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 216 | 0 | 4 | 0 | 0 | 226 | 220 |
| 13:00 | 14:00 | 208 | 0 | 10 | 4 | 0 | 241 | 222 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 157 | 0 | 3 | 0 | 0 | 165 | 160 |
| 18:00 | 19:00 | 134 | 0 | 2 | 0 | 0 | 139 | 136 |
| 19:00 | 20:00 | 194 | 0 | 3 | 3 | 0 | 208 | 200 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 14
Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 55 | 0 | 1 | 0 | 0 | 58 | | 56 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 45 | 0 | 0 | 0 | 0 | 45 | 226 | 45 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 61 | 0 | 2 | 0 | 0 | 66 | | 63 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 55 | 0 | 1 | 0 | 0 | 58 | | 56 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 65 | 0 | 2 | 1 | 0 | 72 | 241 | 68 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 44 | 0 | 1 | 2 | 0 | 51 | | 47 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 47 | 0 | 3 | 0 | 0 | 55 | | 50 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 52 | 0 | 4 | 1 | 0 | 64 | | 57 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 44 | 0 | 2 | 0 | 0 | 49 | 165 | 46 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 36 | 0 | 0 | 0 | 0 | 36 | | 36 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 47 | 0 | 0 | 0 | 0 | 47 | | 47 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 30 | 0 | 1 | 0 | 0 | 33 | | 31 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 33 | 0 | 0 | 0 | 0 | 33 | 139 | 33 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 25 | 0 | 1 | 0 | 0 | 28 | | 26 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 35 | 0 | 0 | 0 | 0 | 35 | | 35 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 41 | 0 | 1 | 0 | 0 | 44 | | 42 | |
| 7:00 | 7:15 | 82 | 0 | 1 | 0 | 0 | 85 | | 83 | 19:00 | 19:15 | 59 | 0 | 0 | 1 | 0 | 61 | 208 | 60 | |
| 7:15 | 7:30 | 88 | 0 | 1 | 0 | 0 | 91 | 316 | 89 | 19:15 | 19:30 | 41 | 0 | 1 | 0 | 0 | 44 | | 42 | |
| 7:30 | 7:45 | 70 | 0 | 0 | 0 | 0 | 70 | | 70 | 19:30 | 19:45 | 52 | 0 | 0 | 1 | 0 | 54 | | 53 | |
| 7:45 | 8:00 | 68 | 0 | 1 | 0 | 0 | 71 | | 69 | 19:45 | 20:00 | 42 | 0 | 2 | 1 | 0 | 49 | | 45 | |
| 8:00 | 8:15 | 61 | 0 | 2 | 1 | 0 | 68 | | 64 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 63 | 0 | 0 | 0 | 0 | 63 | 250 | 63 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 55 | 0 | 1 | 0 | 0 | 58 | | 56 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 59 | 0 | 1 | 0 | 0 | 62 | | 60 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 51 | 0 | 2 | 0 | 0 | 56 | | 53 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 44 | 0 | 1 | 0 | 0 | 47 | 204 | 45 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:30 | 9:45 | 53 | 0 | 1 | 0 | 0 | 56 | | 54 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:45 | 10:00 | 41 | 0 | 2 | 0 | 0 | 46 | | 43 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 43 | 0 | 0 | 0 | 0 | 43 | | 43 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 32 | 0 | 1 | 1 | 0 | 37 | 190 | 34 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:30 | 11:45 | 46 | 0 | 3 | 0 | 0 | 54 | | 49 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:45 | 12:00 | 52 | 0 | 1 | 1 | 0 | 57 | | 54 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

Movimento Contado

14 > 12 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|------|---|-------|-----|---|------|------|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1588 | 0 | 38 | 56 | 0 | 1795 | 1682 |
| 8:00 | 9:00 | 1414 | 0 | 49 | 47 | 0 | 1631 | 1510 |
| 9:00 | 10:00 | 1254 | 0 | 46 | 29 | 0 | 1427 | 1329 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1235 | 0 | 37 | 23 | 0 | 1374 | 1295 |

| Período Tarde | | | | | | | | |
|----------------|-------|------|---|-------|-----|---|------|------|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1637 | 0 | 31 | 21 | 0 | 1757 | 1689 |
| 13:00 | 14:00 | 1361 | 0 | 26 | 22 | 0 | 1470 | 1409 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1726 | 0 | 15 | 42 | 0 | 1848 | 1783 |
| 18:00 | 19:00 | 1709 | 0 | 10 | 47 | 0 | 1828 | 1766 |
| 19:00 | 20:00 | 1338 | 0 | 16 | 39 | 0 | 1456 | 1393 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

14 > 12

Av. Dr. Morães Sales em frente

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|------|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 386 | 0 | 7 | 5 | 0 | 414 | 398 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 407 | 0 | 6 | 5 | 0 | 432 | 418 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 383 | 0 | 10 | 6 | 0 | 420 | 399 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 461 | 0 | 8 | 5 | 0 | 491 | 474 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 350 | 0 | 7 | 5 | 0 | 378 | 362 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 367 | 0 | 5 | 5 | 0 | 390 | 377 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 302 | 0 | 8 | 5 | 0 | 332 | 315 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 342 | 0 | 6 | 7 | 0 | 371 | 355 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 409 | 0 | 2 | 9 | 0 | 432 | 420 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 483 | 0 | 4 | 9 | 0 | 511 | 496 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 406 | 0 | 5 | 11 | 0 | 441 | 422 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 428 | 0 | 4 | 13 | 0 | 464 | 445 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 452 | 0 | 3 | 10 | 0 | 480 | 465 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 438 | 0 | 3 | 12 | 0 | 470 | 453 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 428 | 0 | 2 | 12 | 0 | 457 | 442 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 391 | 0 | 2 | 13 | 0 | 422 | 406 | |
| 7:00 | 7:15 | 367 | 0 | 5 | 12 | 0 | 404 | 384 | 0 | 19:00 | 19:15 | 363 | 0 | 3 | 12 | 0 | 395 | 378 | |
| 7:15 | 7:30 | 374 | 0 | 9 | 15 | 0 | 427 | 398 | 1795 | 19:15 | 19:30 | 374 | 0 | 2 | 9 | 0 | 397 | 385 | |
| 7:30 | 7:45 | 428 | 0 | 13 | 17 | 0 | 495 | 458 | 1795 | 19:30 | 19:45 | 306 | 0 | 7 | 11 | 0 | 346 | 324 | |
| 7:45 | 8:00 | 419 | 0 | 11 | 12 | 0 | 471 | 442 | 1795 | 19:45 | 20:00 | 295 | 0 | 4 | 7 | 0 | 319 | 306 | |
| 8:00 | 8:15 | 393 | 0 | 12 | 11 | 0 | 445 | 416 | 1631 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 349 | 0 | 9 | 15 | 0 | 402 | 373 | 1631 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 338 | 0 | 11 | 13 | 0 | 392 | 362 | 1631 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 334 | 0 | 17 | 8 | 0 | 393 | 359 | 1631 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 346 | 0 | 14 | 13 | 0 | 407 | 373 | 1427 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 289 | 0 | 14 | 6 | 0 | 336 | 309 | 1427 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 310 | 0 | 10 | 7 | 0 | 349 | 327 | 1427 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 309 | 0 | 8 | 3 | 0 | 335 | 320 | 1427 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 330 | 0 | 10 | 5 | 0 | 365 | 345 | 1374 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 293 | 0 | 9 | 5 | 0 | 326 | 307 | 1374 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 290 | 0 | 10 | 6 | 0 | 327 | 306 | 1374 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 322 | 0 | 8 | 7 | 0 | 356 | 337 | 1374 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

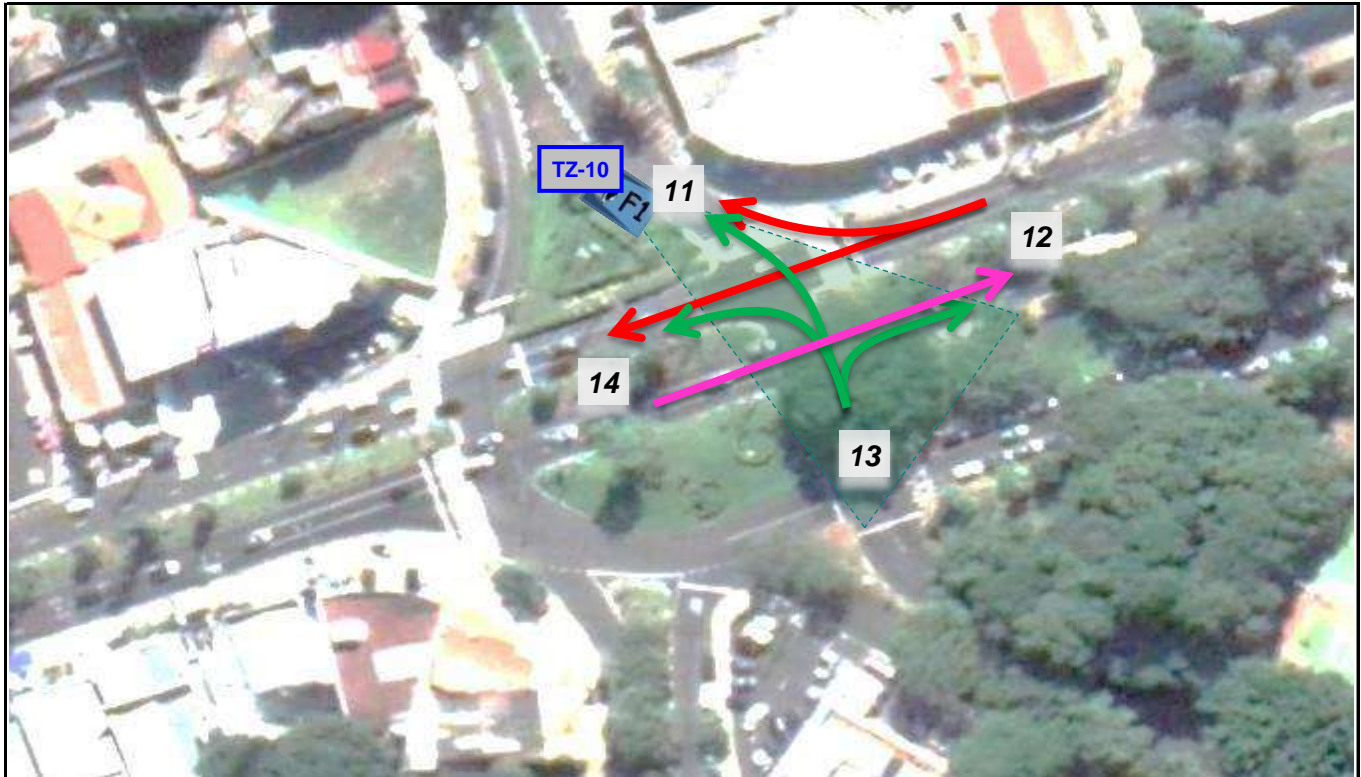
002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado

Ref.: RT-AAP.001-3J21-002_20191024_B

Campinas - SP

Novembro de 2019

Croquis 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019



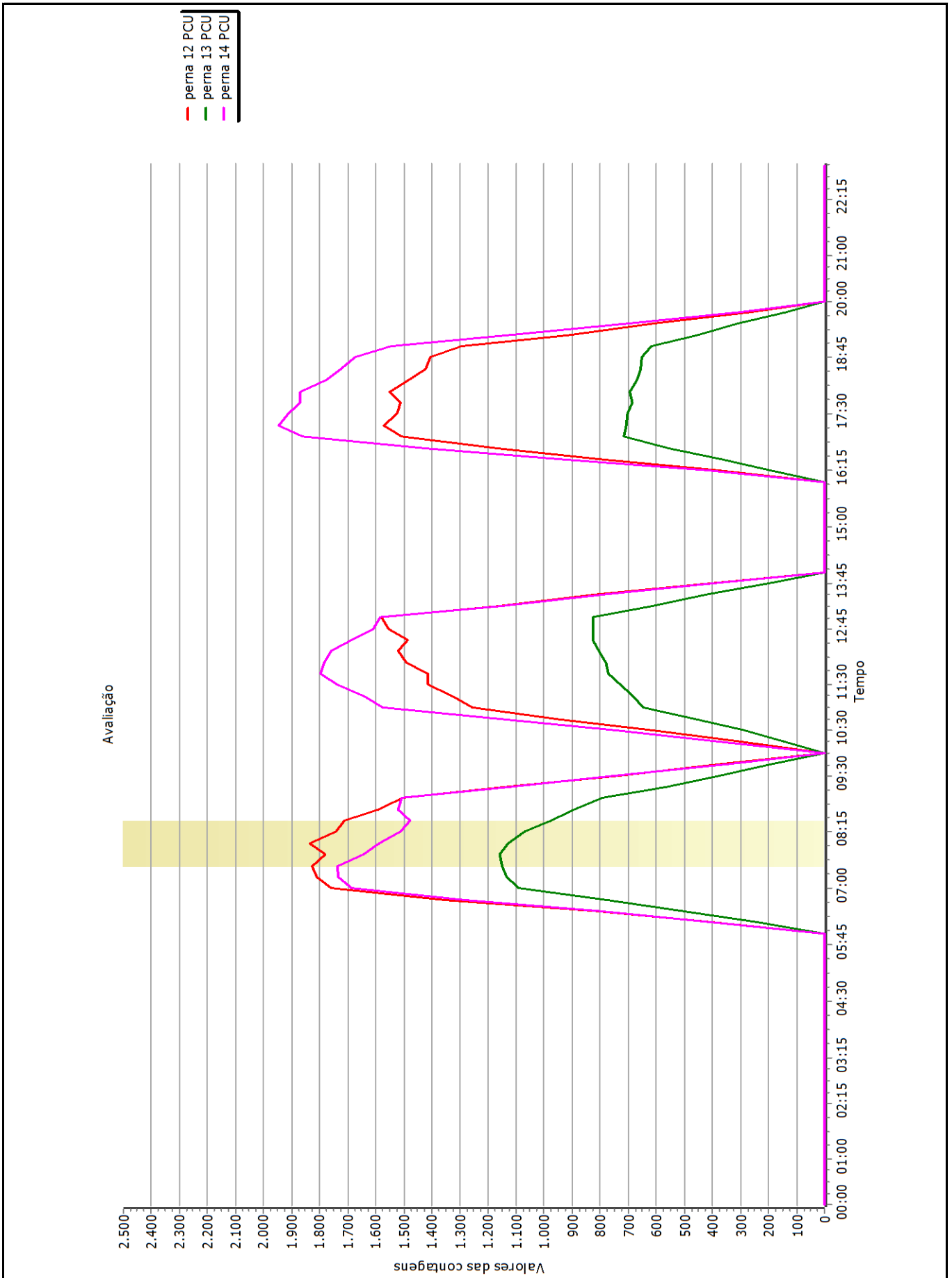
Vídeos



Movimentos Contados

- 12 > 11 Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado
- 12 > 14 Av. Dr. Morães Sales em frente
- 13 > 11 Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado
- 13 > 12 Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales
- 13 > 14 Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales
- 14 > 12 Av. Dr. Morães Sales em frente

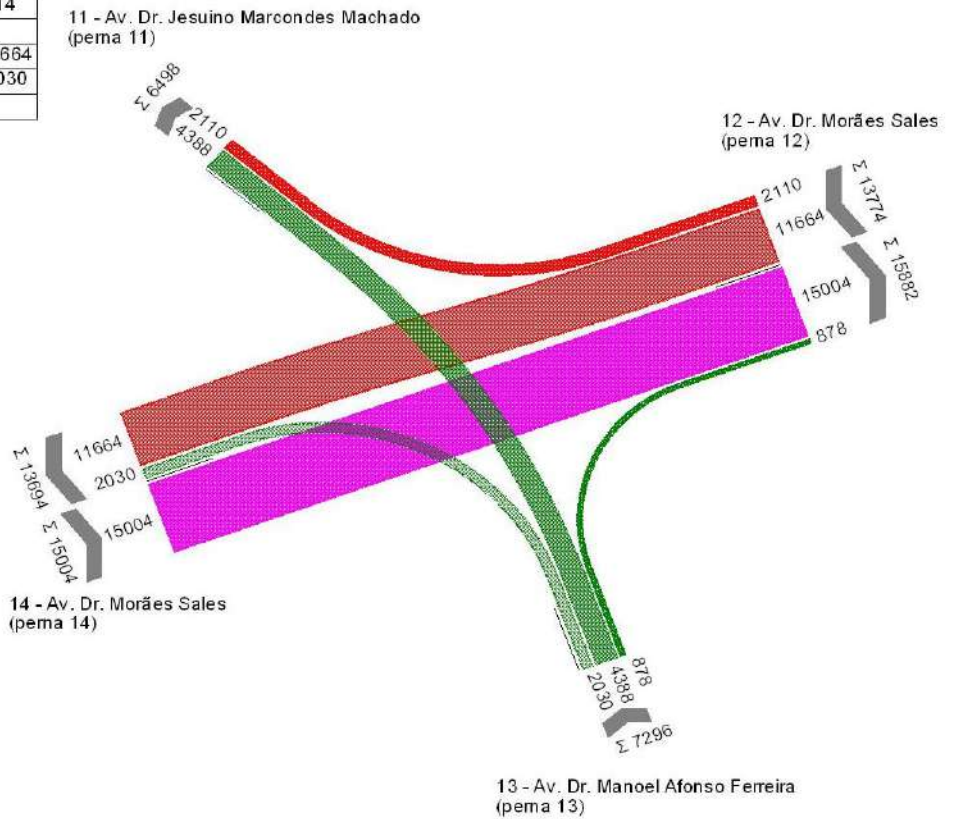
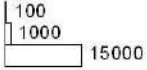
Perfil Horário 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019



Volume Total Diário

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Total On the basis of a time period 24.10.2019 00:00 - 25.10.2019 00:00
 36074 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|------|-------|----|-------|
| 11 | | | | |
| 12 | 2110 | | | 11664 |
| 13 | 4388 | 878 | | 2030 |
| 14 | | 15004 | | |



Volume Hora Pico

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Hora de pico 07:30 - 08:30
 On the basis of a time period 24.10.2019 00:00 - 25.10.2019 00:00
 4713 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 246 | | | 1579 |
| 13 | 790 | 80 | | 279 |
| 14 | | 1739 | | |

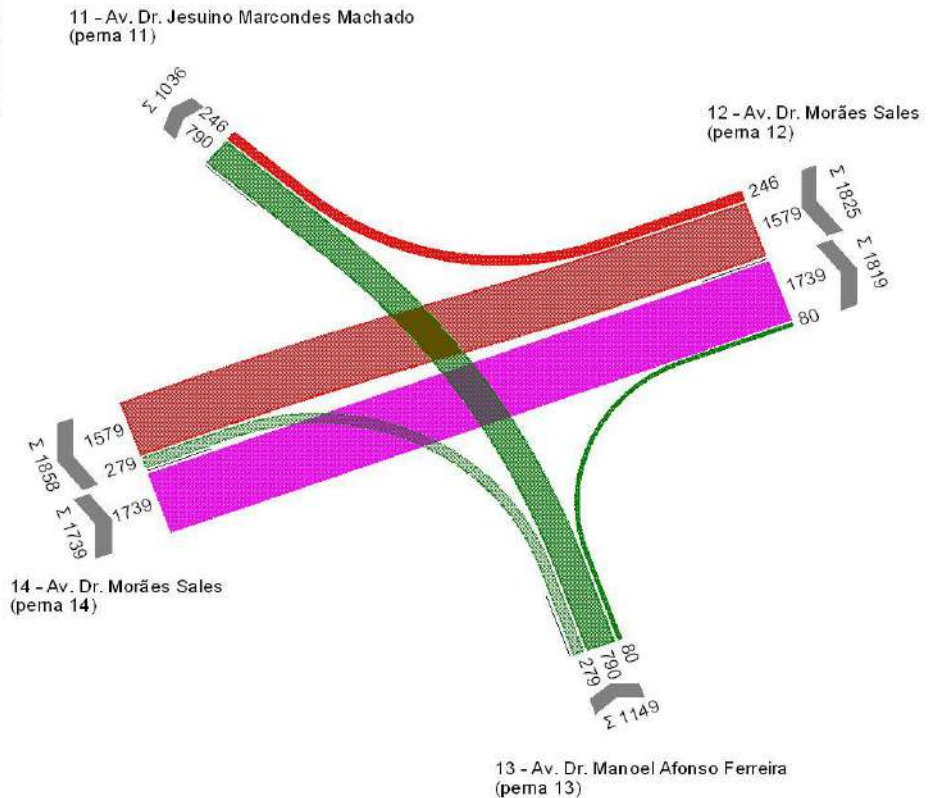
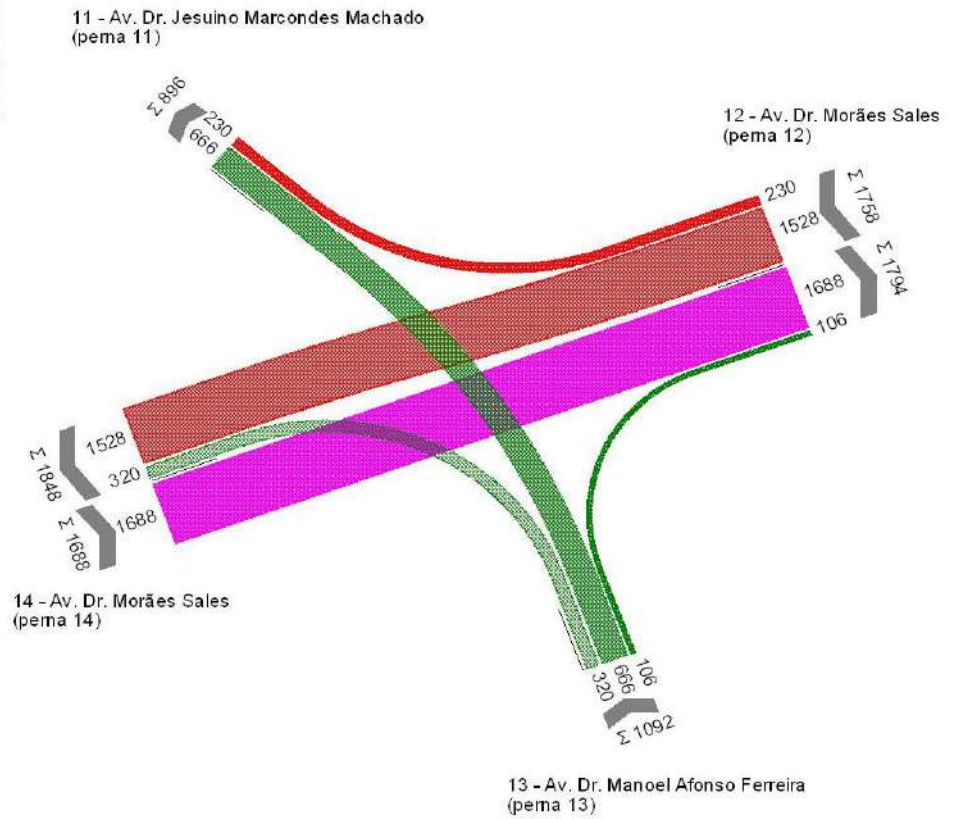
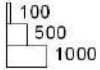


Diagrama de Fluxos **002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019**

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 24.10.2019 07:00 - 24.10.2019 08:00
 4538 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 230 | | | 1528 |
| 13 | 666 | 106 | | 320 |
| 14 | | 1688 | | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 24.10.2019 08:00 - 24.10.2019 09:00
 4551 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 266 | | | 1568 |
| 13 | 790 | 80 | | 259 |
| 14 | | 1588 | | |

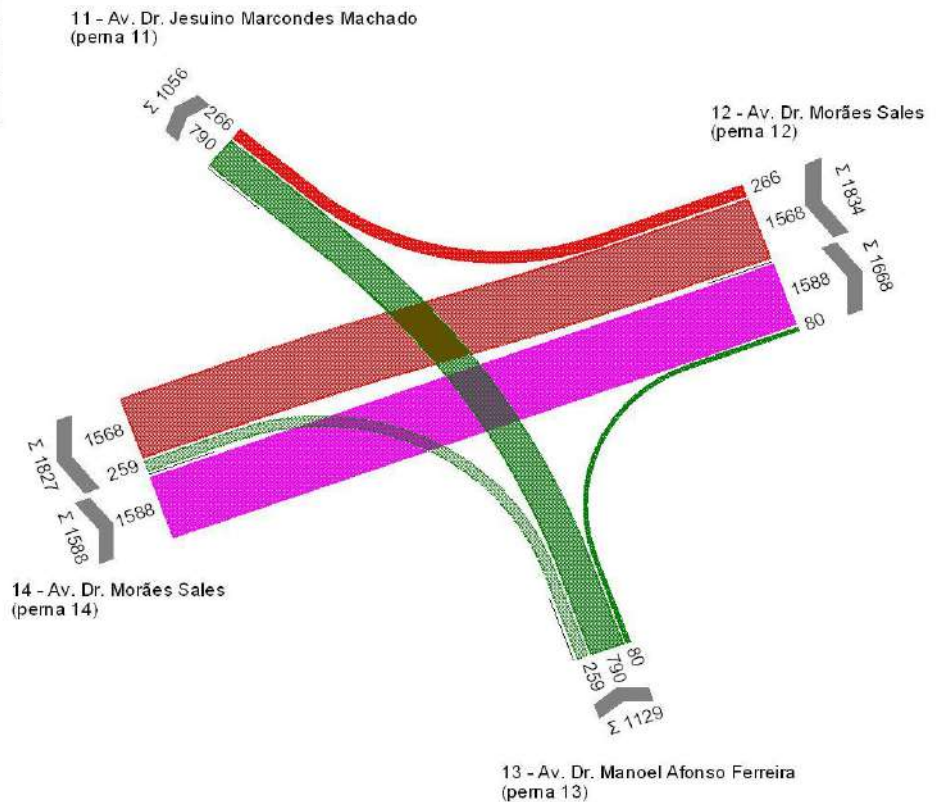
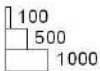


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 24.10.2019 09:00 - 24.10.2019 10:00
 3802 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 254 | | | 1250 |
| 13 | 504 | 77 | | 210 |
| 14 | | 1507 | | |

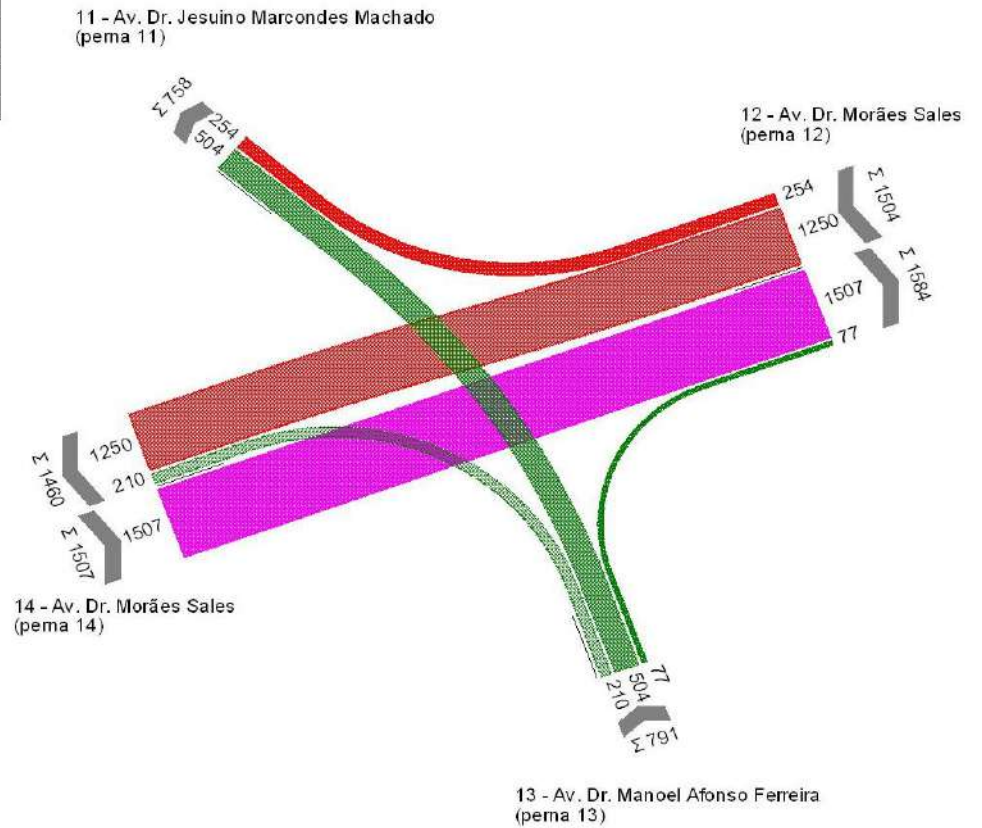
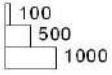
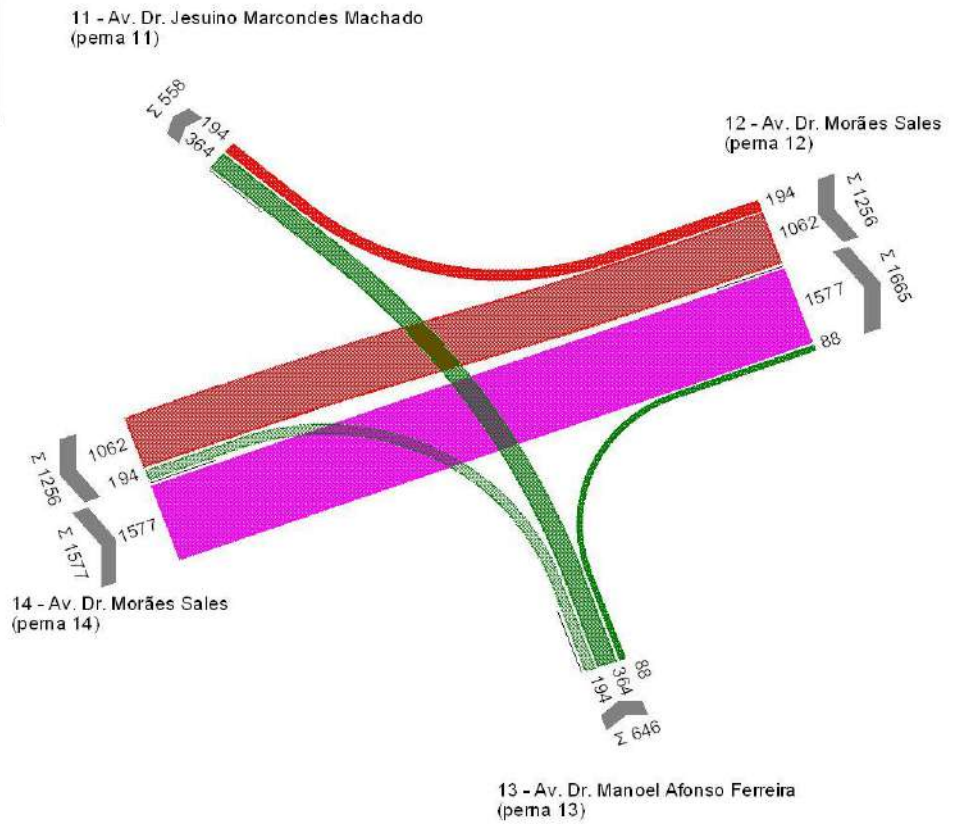


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 24.10.2019 11:00 - 24.10.2019 12:00
 3479 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 194 | | | 1062 |
| 13 | 364 | 88 | | 194 |
| 14 | | 1577 | | |

100
 500
 1000



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 24.10.2019 12:00 - 24.10.2019 13:00
 4052 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 247 | | | 1242 |
| 13 | 436 | 104 | | 239 |
| 14 | | 1784 | | |

100
 500
 1000

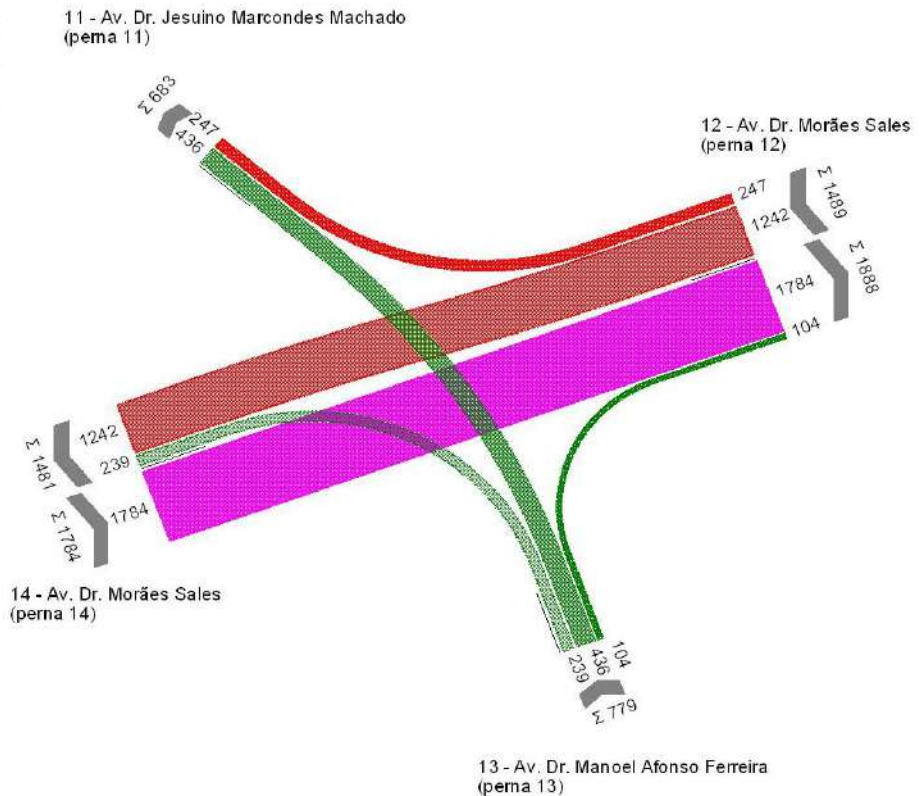


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 24.10.2019 13:00 - 24.10.2019 14:00
 3994 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 261 | | | 1320 |
| 13 | 450 | 101 | | 278 |
| 14 | | 1584 | | |

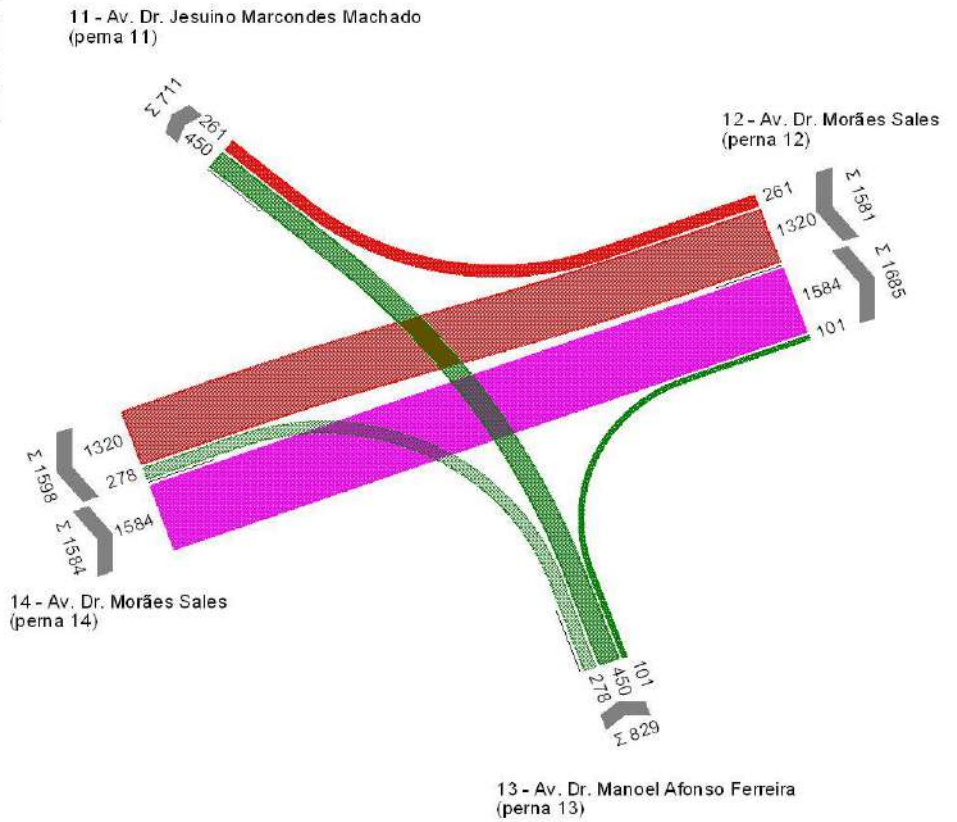
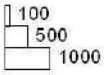
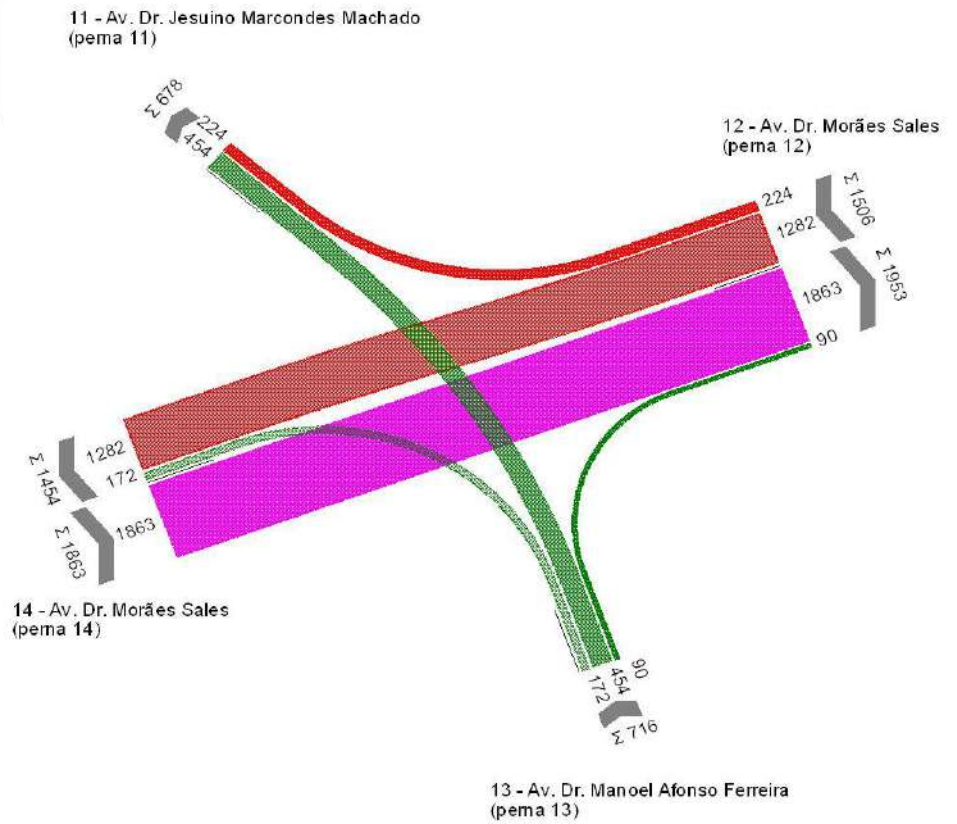
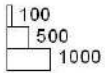


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 24.10.2019 17:00 - 24.10.2019 18:00
 4085 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 224 | | | 1282 |
| 13 | 454 | 90 | | 172 |
| 14 | | 1863 | | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 24.10.2019 18:00 - 24.10.2019 19:00
 4114 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 232 | | | 1317 |
| 13 | 438 | 114 | | 144 |
| 14 | | 1869 | | |

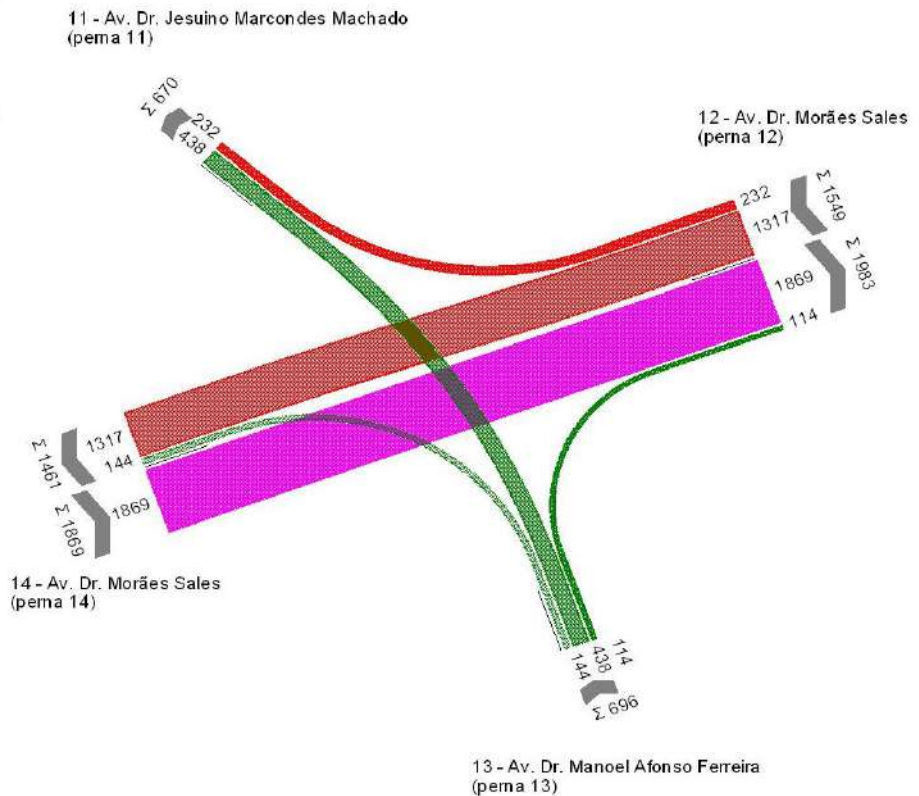
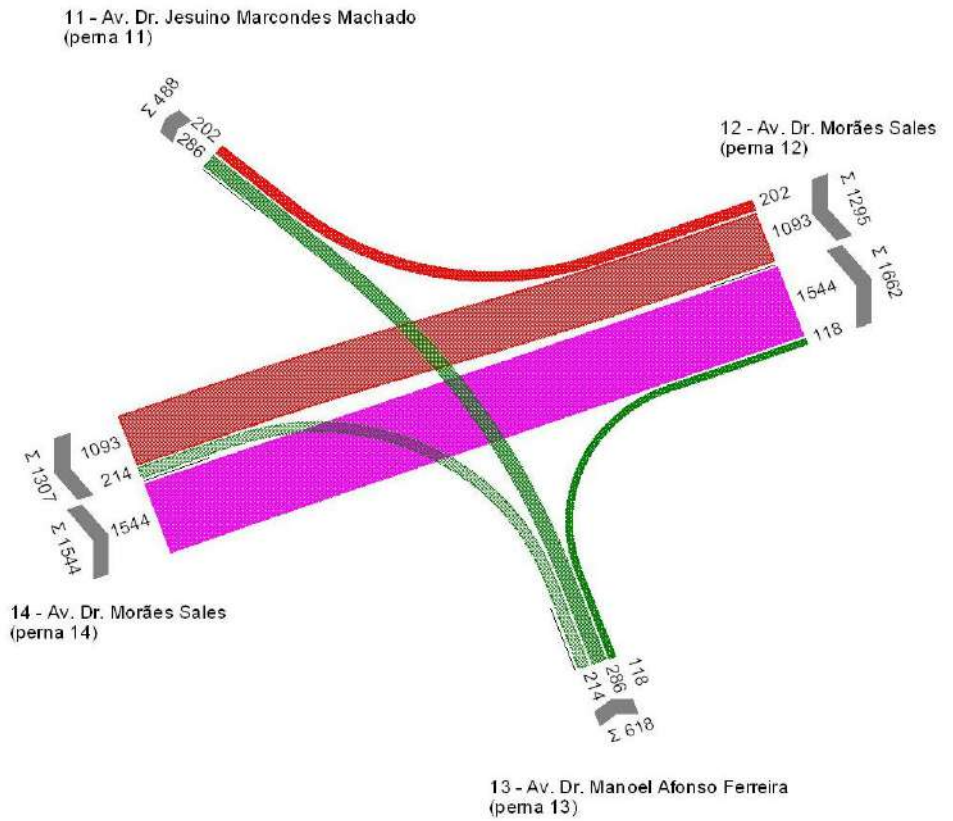
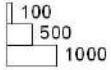


Diagrama de Fluxos 002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 24.10.2019 19:00 - 24.10.2019 20:00
 3457 PCU

| De \ Para | 11 | 12 | 13 | 14 |
|-----------|-----|------|----|------|
| 11 | | | | |
| 12 | 202 | | | 1093 |
| 13 | 286 | 118 | | 214 |
| 14 | | 1544 | | |



PCU

002 - Av. Dr. Morães Sales X Av. Dr. Jesuino Marcondes Machado - 24/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

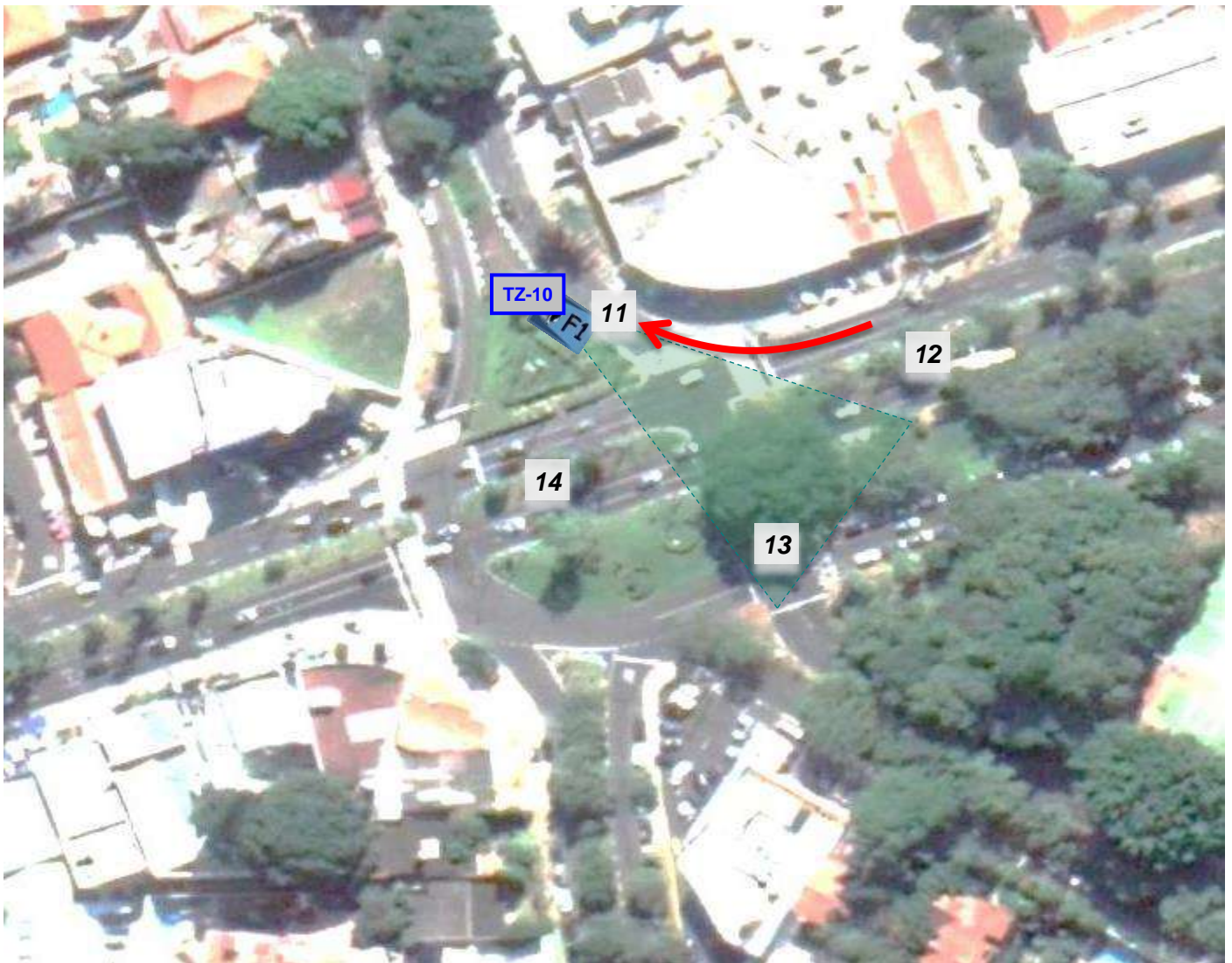
- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

12 > 11 Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 225 | 0 | 2 | 0 | 0 | 230 | 227 |
| 8:00 | 9:00 | 253 | 0 | 5 | 0 | 0 | 266 | 258 |
| 9:00 | 10:00 | 244 | 0 | 4 | 0 | 0 | 254 | 248 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 186 | 0 | 3 | 0 | 0 | 194 | 189 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 242 | 0 | 2 | 0 | 0 | 247 | 244 |
| 13:00 | 14:00 | 256 | 0 | 2 | 0 | 0 | 261 | 258 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 220 | 0 | 1 | 1 | 0 | 225 | 222 |
| 18:00 | 19:00 | 230 | 0 | 1 | 0 | 0 | 233 | 231 |
| 19:00 | 20:00 | 199 | 0 | 1 | 0 | 0 | 202 | 200 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
12 > 11
Av. Dr. Morães Sales conv à dir. Av. Dr. Jesuino Marcondes Machado
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 58 | 0 | 1 | 0 | 0 | 61 | | 59 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 60 | 0 | 0 | 0 | 0 | 60 | 247 | 60 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 61 | 0 | 0 | 0 | 0 | 61 | | 61 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 63 | 0 | 1 | 0 | 0 | 66 | | 64 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 65 | 0 | 0 | 0 | 0 | 65 | 261 | 65 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 64 | 0 | 1 | 0 | 0 | 67 | | 65 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 65 | 0 | 1 | 0 | 0 | 68 | | 66 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 62 | 0 | 0 | 0 | 0 | 62 | | 62 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 71 | 0 | 0 | 0 | 0 | 71 | 225 | 71 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 56 | 0 | 0 | 0 | 0 | 56 | | 56 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 44 | 0 | 0 | 1 | 0 | 46 | | 45 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 49 | 0 | 1 | 0 | 0 | 52 | | 50 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 58 | 0 | 0 | 0 | 0 | 58 | 233 | 58 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 56 | 0 | 0 | 0 | 0 | 56 | | 56 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 59 | 0 | 1 | 0 | 0 | 62 | | 60 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 57 | 0 | 0 | 0 | 0 | 57 | | 57 |
| 7:00 | 7:15 | 54 | 0 | 0 | 0 | 0 | 54 | | 54 | 19:00 | 19:15 | 55 | 0 | 0 | 0 | 0 | 55 | 202 | 55 |
| 7:15 | 7:30 | 57 | 0 | 1 | 0 | 0 | 60 | 230 | 58 | 19:15 | 19:30 | 51 | 0 | 1 | 0 | 0 | 54 | | 52 |
| 7:30 | 7:45 | 59 | 0 | 1 | 0 | 0 | 62 | | 60 | 19:30 | 19:45 | 45 | 0 | 0 | 0 | 0 | 45 | | 45 |
| 7:45 | 8:00 | 55 | 0 | 0 | 0 | 0 | 55 | | 55 | 19:45 | 20:00 | 48 | 0 | 0 | 0 | 0 | 48 | | 48 |
| 8:00 | 8:15 | 58 | 0 | 2 | 0 | 0 | 63 | | 60 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 64 | 0 | 1 | 0 | 0 | 67 | 266 | 65 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 68 | 0 | 2 | 0 | 0 | 73 | | 70 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 63 | 0 | 0 | 0 | 0 | 63 | | 63 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 62 | 0 | 1 | 0 | 0 | 65 | | 63 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 60 | 0 | 1 | 0 | 0 | 63 | 254 | 61 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 58 | 0 | 1 | 0 | 0 | 61 | | 59 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 64 | 0 | 1 | 0 | 0 | 67 | | 65 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 50 | 0 | 0 | 0 | 0 | 50 | 194 | 50 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 47 | 0 | 1 | 0 | 0 | 50 | | 48 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 37 | 0 | 2 | 0 | 0 | 42 | | 39 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 52 | 0 | 0 | 0 | 0 | 52 | | 52 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

12 > 14 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1397 | 0 | 19 | 42 | 0 | 1529 | 1458 |
| 8:00 | 9:00 | 1430 | 0 | 21 | 43 | 0 | 1569 | 1494 |
| 9:00 | 10:00 | 1127 | 0 | 27 | 28 | 0 | 1251 | 1182 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 922 | 0 | 37 | 24 | 0 | 1063 | 983 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1141 | 0 | 22 | 23 | 0 | 1242 | 1186 |
| 13:00 | 14:00 | 1194 | 0 | 33 | 22 | 0 | 1321 | 1249 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1164 | 0 | 8 | 49 | 0 | 1282 | 1221 |
| 18:00 | 19:00 | 1213 | 0 | 12 | 37 | 0 | 1317 | 1262 |
| 19:00 | 20:00 | 1015 | 0 | 12 | 24 | 0 | 1093 | 1051 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---------------------------------------|
| Movimento Contado | |
| 12 > 14 | Av. Dr. Morães Sales em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 297 | 0 | 5 | 5 | 0 | 320 | 307 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 303 | 0 | 8 | 5 | 0 | 333 | 316 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 255 | 0 | 1 | 6 | 0 | 270 | 262 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 286 | 0 | 8 | 7 | 0 | 320 | 301 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 331 | 0 | 5 | 2 | 0 | 348 | 338 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 251 | 0 | 10 | 8 | 0 | 292 | 269 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 301 | 0 | 7 | 7 | 0 | 333 | 315 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 311 | 0 | 11 | 5 | 0 | 349 | 327 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 284 | 0 | 1 | 12 | 0 | 311 | 297 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 319 | 0 | 5 | 14 | 0 | 360 | 338 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 286 | 0 | 1 | 15 | 0 | 319 | 302 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 275 | 0 | 1 | 8 | 0 | 294 | 284 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 351 | 0 | 7 | 10 | 0 | 389 | 368 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 293 | 0 | 1 | 9 | 0 | 314 | 303 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 273 | 0 | 0 | 8 | 0 | 289 | 281 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 296 | 0 | 4 | 10 | 0 | 326 | 310 |
| 7:00 | 7:15 | 333 | 0 | 0 | 12 | 0 | 357 | 345 | 19:00 | 19:15 | 295 | 0 | 4 | 9 | 0 | 323 | 308 |
| 7:15 | 7:30 | 326 | 0 | 3 | 8 | 0 | 350 | 337 | 19:15 | 19:30 | 251 | 0 | 0 | 4 | 0 | 259 | 255 |
| 7:30 | 7:45 | 435 | 0 | 7 | 11 | 0 | 475 | 453 | 19:30 | 19:45 | 255 | 0 | 4 | 10 | 0 | 285 | 269 |
| 7:45 | 8:00 | 303 | 0 | 9 | 11 | 0 | 348 | 323 | 19:45 | 20:00 | 214 | 0 | 4 | 1 | 0 | 226 | 219 |
| 8:00 | 8:15 | 367 | 0 | 4 | 11 | 0 | 399 | 382 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 314 | 0 | 8 | 12 | 0 | 358 | 334 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 385 | 0 | 4 | 11 | 0 | 417 | 400 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 364 | 0 | 5 | 9 | 0 | 395 | 378 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 279 | 0 | 2 | 10 | 0 | 304 | 291 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 293 | 0 | 13 | 4 | 0 | 334 | 310 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 269 | 0 | 8 | 10 | 0 | 309 | 287 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 286 | 0 | 4 | 4 | 0 | 304 | 294 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 224 | 0 | 11 | 4 | 0 | 260 | 239 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 217 | 0 | 11 | 5 | 0 | 255 | 233 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 261 | 0 | 6 | 6 | 0 | 288 | 273 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 220 | 0 | 9 | 9 | 0 | 261 | 238 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

13 > 11 Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 629 | 0 | 11 | 5 | 0 | 667 | 645 |
| 8:00 | 9:00 | 765 | 0 | 7 | 4 | 0 | 791 | 776 |
| 9:00 | 10:00 | 486 | 0 | 7 | 0 | 0 | 504 | 493 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 341 | 0 | 7 | 3 | 0 | 365 | 351 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 414 | 0 | 8 | 1 | 0 | 436 | 423 |
| 13:00 | 14:00 | 436 | 0 | 4 | 2 | 0 | 450 | 442 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 431 | 0 | 5 | 5 | 0 | 454 | 441 |
| 18:00 | 19:00 | 415 | 0 | 5 | 5 | 0 | 438 | 425 |
| 19:00 | 20:00 | 266 | 0 | 5 | 4 | 0 | 287 | 275 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

13 > 11

Av. Dr. Manoel Afonso Ferreira em frente Av. Dr. Jesuino Marcondes Machado

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 99 | 0 | 1 | 0 | 0 | 102 | | 100 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 101 | 0 | 2 | 1 | 0 | 108 | 436 | 104 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:30 | 12:45 | 102 | 0 | 3 | 0 | 0 | 110 | | 105 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 112 | 0 | 2 | 0 | 0 | 117 | | 114 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 109 | 0 | 1 | 1 | 0 | 114 | | 111 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 111 | 0 | 0 | 0 | 0 | 111 | 450 | 111 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 109 | 0 | 2 | 0 | 0 | 114 | | 111 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 107 | 0 | 1 | 1 | 0 | 112 | | 109 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 122 | 0 | 1 | 2 | 0 | 129 | | 454 | 125 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 100 | 0 | 2 | 0 | 0 | 105 | 102 | | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 107 | 0 | 1 | 1 | 0 | 112 | 109 | | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 102 | 0 | 1 | 2 | 0 | 109 | 105 | | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 118 | 0 | 2 | 1 | 0 | 125 | 438 | 121 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 99 | 0 | 0 | 0 | 0 | 99 | | 99 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 101 | 0 | 1 | 2 | 0 | 108 | | 104 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 97 | 0 | 2 | 2 | 0 | 106 | | 101 | |
| 7:00 | 7:15 | 114 | 0 | 2 | 1 | 0 | 121 | | 117 | 19:00 | 19:15 | 69 | 0 | 1 | 1 | 0 | 74 | 287 | 71 | |
| 7:15 | 7:30 | 137 | 0 | 4 | 2 | 0 | 151 | 667 | 143 | 19:15 | 19:30 | 70 | 0 | 1 | 2 | 0 | 77 | | 73 | |
| 7:30 | 7:45 | 159 | 0 | 3 | 1 | 0 | 169 | | 163 | 19:30 | 19:45 | 72 | 0 | 2 | 0 | 0 | 77 | | 74 | |
| 7:45 | 8:00 | 219 | 0 | 2 | 1 | 0 | 226 | | 222 | 19:45 | 20:00 | 55 | 0 | 1 | 1 | 0 | 60 | | 57 | |
| 8:00 | 8:15 | 199 | 0 | 1 | 0 | 0 | 202 | | 200 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 185 | 0 | 2 | 2 | 0 | 194 | 791 | 189 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 180 | 0 | 3 | 1 | 0 | 190 | | 184 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 201 | 0 | 1 | 1 | 0 | 206 | | 203 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 155 | 0 | 1 | 0 | 0 | 158 | | 156 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 113 | 0 | 2 | 0 | 0 | 118 | 504 | 115 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:30 | 9:45 | 102 | 0 | 3 | 0 | 0 | 110 | | 105 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:45 | 10:00 | 116 | 0 | 1 | 0 | 0 | 119 | | 117 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 77 | 0 | 2 | 1 | 0 | 84 | | 80 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 75 | 0 | 2 | 0 | 0 | 80 | 365 | 77 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:30 | 11:45 | 89 | 0 | 1 | 2 | 0 | 96 | | 92 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:45 | 12:00 | 100 | 0 | 2 | 0 | 0 | 105 | | 102 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

Movimento Contado

13 > 12 Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 94 | 0 | 3 | 2 | 0 | 106 | 99 |
| 8:00 | 9:00 | 69 | 0 | 3 | 2 | 0 | 81 | 74 |
| 9:00 | 10:00 | 60 | 0 | 6 | 1 | 0 | 77 | 67 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 71 | 0 | 5 | 2 | 0 | 88 | 78 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 90 | 0 | 5 | 1 | 0 | 105 | 96 |
| 13:00 | 14:00 | 82 | 0 | 6 | 2 | 0 | 101 | 90 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 88 | 0 | 0 | 1 | 0 | 90 | 89 |
| 18:00 | 19:00 | 96 | 0 | 5 | 3 | 0 | 115 | 104 |
| 19:00 | 20:00 | 94 | 0 | 7 | 3 | 0 | 118 | 104 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 12
Av. Dr. Manoel Afonso Ferreira conv à dir. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 19 | 0 | 0 | 0 | 0 | 19 | | 19 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 23 | 0 | 2 | 0 | 0 | 28 | 105 | 25 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 25 | 0 | 3 | 1 | 0 | 35 | | 29 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 23 | 0 | 0 | 0 | 0 | 23 | | 23 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 20 | 0 | 1 | 1 | 0 | 25 | 101 | 22 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 20 | 0 | 0 | 1 | 0 | 22 | | 21 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 19 | 0 | 4 | 0 | 0 | 29 | | 23 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 23 | 0 | 1 | 0 | 0 | 26 | | 24 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 20 | 0 | 0 | 0 | 0 | 20 | 90 | 20 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 20 | 0 | 0 | 1 | 0 | 22 | | 21 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 27 | 0 | 0 | 0 | 0 | 27 | | 27 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 21 | 0 | 0 | 0 | 0 | 21 | | 21 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 23 | 0 | 1 | 2 | 0 | 30 | 115 | 26 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 28 | 0 | 2 | 0 | 0 | 33 | | 30 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 21 | 0 | 0 | 1 | 0 | 23 | | 22 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 24 | 0 | 2 | 0 | 0 | 29 | | 26 | |
| 7:00 | 7:15 | 36 | 0 | 0 | 1 | 0 | 38 | | 37 | 19:00 | 19:15 | 25 | 0 | 1 | 0 | 0 | 28 | 118 | 26 | |
| 7:15 | 7:30 | 22 | 0 | 0 | 1 | 0 | 24 | 106 | 23 | 19:15 | 19:30 | 24 | 0 | 2 | 0 | 0 | 29 | | 26 | |
| 7:30 | 7:45 | 18 | 0 | 3 | 0 | 0 | 26 | | 21 | 19:30 | 19:45 | 22 | 0 | 2 | 0 | 0 | 27 | | 24 | |
| 7:45 | 8:00 | 18 | 0 | 0 | 0 | 0 | 18 | | 18 | 19:45 | 20:00 | 23 | 0 | 2 | 3 | 0 | 34 | | 28 | |
| 8:00 | 8:15 | 15 | 0 | 1 | 1 | 0 | 20 | | 17 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 17 | 0 | 0 | 0 | 0 | 17 | 81 | 17 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 21 | 0 | 0 | 1 | 0 | 23 | | 22 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 16 | 0 | 2 | 0 | 0 | 21 | | 18 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 13 | 0 | 0 | 0 | 0 | 13 | | 13 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 16 | 0 | 1 | 0 | 0 | 19 | 77 | 17 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:30 | 9:45 | 16 | 0 | 4 | 0 | 0 | 26 | | 20 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:45 | 10:00 | 15 | 0 | 1 | 1 | 0 | 20 | | 17 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 15 | 0 | 1 | 0 | 0 | 18 | | 16 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 19 | 0 | 2 | 1 | 0 | 26 | 88 | 22 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:30 | 11:45 | 20 | 0 | 0 | 0 | 0 | 20 | | 20 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:45 | 12:00 | 17 | 0 | 2 | 1 | 0 | 24 | | 20 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |

Movimento Contado

13 > 14 Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 312 | 0 | 3 | 0 | 0 | 320 | 315 |
| 8:00 | 9:00 | 244 | 0 | 6 | 0 | 0 | 259 | 250 |
| 9:00 | 10:00 | 193 | 0 | 7 | 0 | 0 | 211 | 200 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 177 | 0 | 6 | 1 | 0 | 194 | 184 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 225 | 0 | 4 | 2 | 0 | 239 | 231 |
| 13:00 | 14:00 | 266 | 0 | 3 | 2 | 0 | 278 | 271 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 160 | 0 | 4 | 1 | 0 | 172 | 165 |
| 18:00 | 19:00 | 135 | 0 | 3 | 1 | 0 | 145 | 139 |
| 19:00 | 20:00 | 197 | 0 | 3 | 5 | 0 | 215 | 205 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
13 > 14
Av. Dr. Manoel Afonso Ferreira conv à esq. Av. Dr. Morães Sales
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 57 | 0 | 1 | 1 | 0 | 62 | 59 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 49 | 0 | 0 | 0 | 0 | 49 | 49 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 63 | 0 | 2 | 1 | 0 | 70 | 66 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 56 | 0 | 1 | 0 | 0 | 59 | 57 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 67 | 0 | 1 | 1 | 0 | 72 | 69 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 70 | 0 | 0 | 0 | 0 | 70 | 70 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 68 | 0 | 1 | 1 | 0 | 73 | 70 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 61 | 0 | 1 | 0 | 0 | 64 | 62 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 45 | 0 | 1 | 1 | 0 | 50 | 47 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 35 | 0 | 2 | 0 | 0 | 40 | 37 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 48 | 0 | 0 | 0 | 0 | 48 | 48 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 32 | 0 | 1 | 0 | 0 | 35 | 33 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 35 | 0 | 0 | 1 | 0 | 37 | 36 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 28 | 0 | 1 | 0 | 0 | 31 | 29 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 33 | 0 | 2 | 0 | 0 | 38 | 35 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 39 | 0 | 0 | 0 | 0 | 39 | 39 |
| 7:00 | 7:15 | 84 | 0 | 1 | 0 | 0 | 87 | 85 | 19:00 | 19:15 | 55 | 0 | 1 | 2 | 0 | 62 | 58 |
| 7:15 | 7:30 | 86 | 0 | 1 | 0 | 0 | 89 | 87 | 19:15 | 19:30 | 43 | 0 | 1 | 0 | 0 | 46 | 44 |
| 7:30 | 7:45 | 72 | 0 | 0 | 0 | 0 | 72 | 72 | 19:30 | 19:45 | 55 | 0 | 1 | 1 | 0 | 60 | 57 |
| 7:45 | 8:00 | 70 | 0 | 1 | 0 | 0 | 73 | 71 | 19:45 | 20:00 | 44 | 0 | 0 | 2 | 0 | 48 | 46 |
| 8:00 | 8:15 | 62 | 0 | 2 | 0 | 0 | 67 | 64 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 65 | 0 | 1 | 0 | 0 | 68 | 66 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 57 | 0 | 2 | 0 | 0 | 62 | 59 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 60 | 0 | 1 | 0 | 0 | 63 | 61 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 53 | 0 | 2 | 0 | 0 | 58 | 55 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 46 | 0 | 1 | 0 | 0 | 49 | 47 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 51 | 0 | 2 | 0 | 0 | 56 | 53 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 43 | 0 | 2 | 0 | 0 | 48 | 45 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 44 | 0 | 1 | 0 | 0 | 47 | 45 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 31 | 0 | 0 | 0 | 0 | 31 | 31 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 47 | 0 | 2 | 1 | 0 | 54 | 50 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 55 | 0 | 3 | 0 | 0 | 63 | 58 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

14 > 12 Av. Dr. Morães Sales em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 1523 | 0 | 27 | 49 | 0 | 1689 | 1599 |
| 8:00 | 9:00 | 1386 | 0 | 49 | 40 | 0 | 1589 | 1475 |
| 9:00 | 10:00 | 1324 | 0 | 50 | 29 | 0 | 1507 | 1403 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 1443 | 0 | 36 | 22 | 0 | 1577 | 1501 |

| Período Tarde | | | | | | | | |
|---------------|-------|------|---|-------|-----|---|------|------|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 1667 | 0 | 26 | 26 | 0 | 1784 | 1719 |
| 13:00 | 14:00 | 1464 | 0 | 32 | 20 | 0 | 1584 | 1516 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 1764 | 0 | 14 | 32 | 0 | 1863 | 1810 |
| 18:00 | 19:00 | 1760 | 0 | 14 | 37 | 0 | 1869 | 1811 |
| 19:00 | 20:00 | 1450 | 0 | 7 | 38 | 0 | 1544 | 1495 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---------------------------------------|
| Movimento Contado | |
| 14 > 12 | Av. Dr. Morães Sales em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|------|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 423 | 0 | 8 | 4 | 0 | 451 | 435 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 425 | 0 | 4 | 8 | 0 | 451 | 437 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 421 | 0 | 9 | 7 | 0 | 458 | 437 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 398 | 0 | 5 | 7 | 0 | 425 | 410 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 400 | 0 | 7 | 4 | 0 | 426 | 411 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 343 | 0 | 10 | 5 | 0 | 378 | 358 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 345 | 0 | 9 | 6 | 0 | 380 | 360 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 376 | 0 | 6 | 5 | 0 | 401 | 387 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 401 | 0 | 3 | 6 | 0 | 421 | 410 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 500 | 0 | 3 | 5 | 0 | 518 | 508 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 446 | 0 | 5 | 12 | 0 | 483 | 463 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 417 | 0 | 3 | 9 | 0 | 443 | 429 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 478 | 0 | 2 | 11 | 0 | 505 | 491 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 454 | 0 | 4 | 10 | 0 | 484 | 468 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 416 | 0 | 3 | 7 | 0 | 438 | 426 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 412 | 0 | 5 | 9 | 0 | 443 | 426 | |
| 7:00 | 7:15 | 381 | 0 | 5 | 12 | 0 | 418 | 398 | 0 | 19:00 | 19:15 | 375 | 0 | 3 | 14 | 0 | 411 | 392 | |
| 7:15 | 7:30 | 362 | 0 | 4 | 9 | 0 | 390 | 375 | 1689 | 19:15 | 19:30 | 414 | 0 | 1 | 10 | 0 | 437 | 425 | |
| 7:30 | 7:45 | 407 | 0 | 14 | 16 | 0 | 474 | 437 | 0 | 19:30 | 19:45 | 372 | 0 | 0 | 6 | 0 | 384 | 378 | |
| 7:45 | 8:00 | 373 | 0 | 4 | 12 | 0 | 407 | 389 | 0 | 19:45 | 20:00 | 289 | 0 | 3 | 8 | 0 | 313 | 300 | |
| 8:00 | 8:15 | 392 | 0 | 20 | 11 | 0 | 464 | 423 | 0 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 347 | 0 | 10 | 11 | 0 | 394 | 368 | 1589 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 332 | 0 | 11 | 9 | 0 | 378 | 352 | 0 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 315 | 0 | 8 | 9 | 0 | 353 | 332 | 0 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 347 | 0 | 10 | 8 | 0 | 388 | 365 | 0 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 306 | 0 | 15 | 8 | 0 | 360 | 329 | 1507 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 356 | 0 | 18 | 9 | 0 | 419 | 383 | 0 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 315 | 0 | 7 | 4 | 0 | 341 | 326 | 0 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 350 | 0 | 13 | 4 | 0 | 391 | 367 | 1577 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 316 | 0 | 10 | 6 | 0 | 353 | 332 | 0 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 365 | 0 | 8 | 6 | 0 | 397 | 379 | 0 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 412 | 0 | 5 | 6 | 0 | 437 | 423 | 0 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

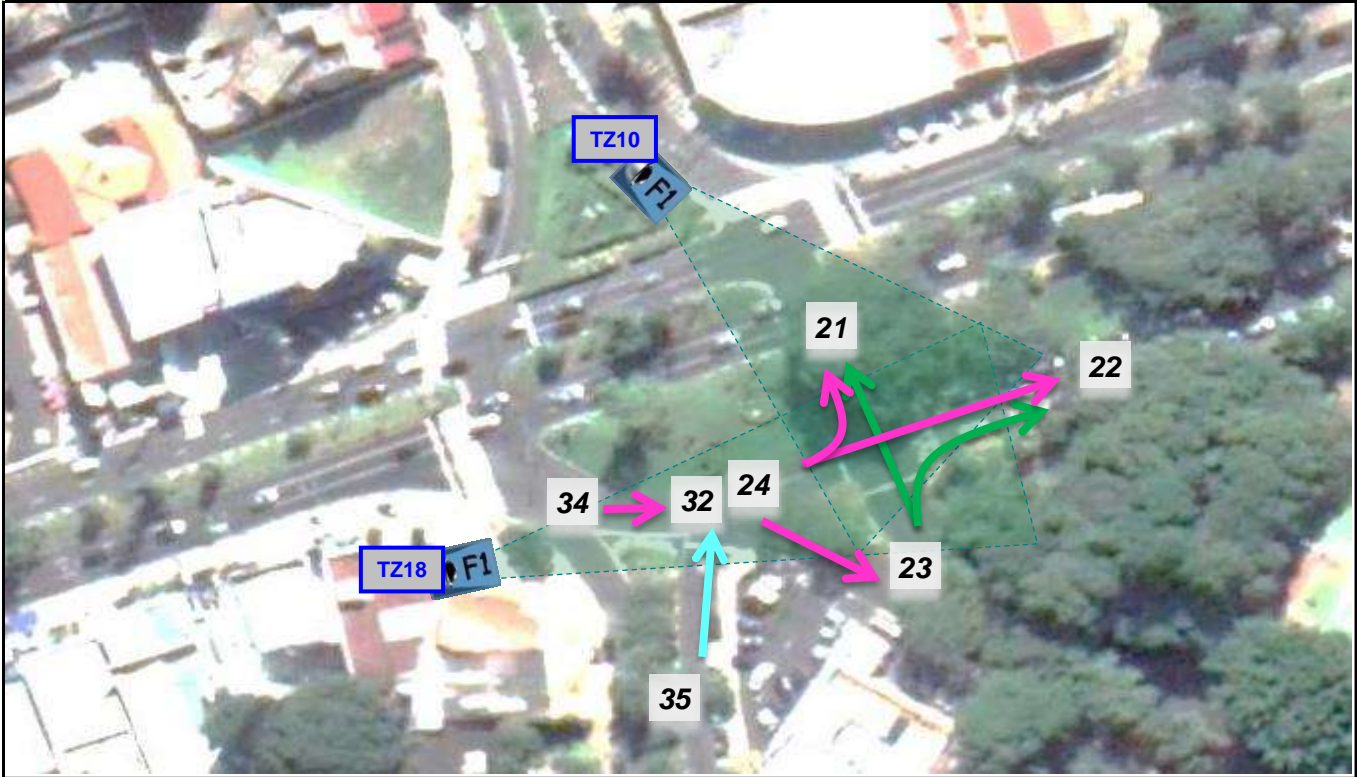
003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira

Ref.: RT-AAP.001-3J21-003_20191022_A

Campinas - SP

Novembro de 2019

Croquis **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019**



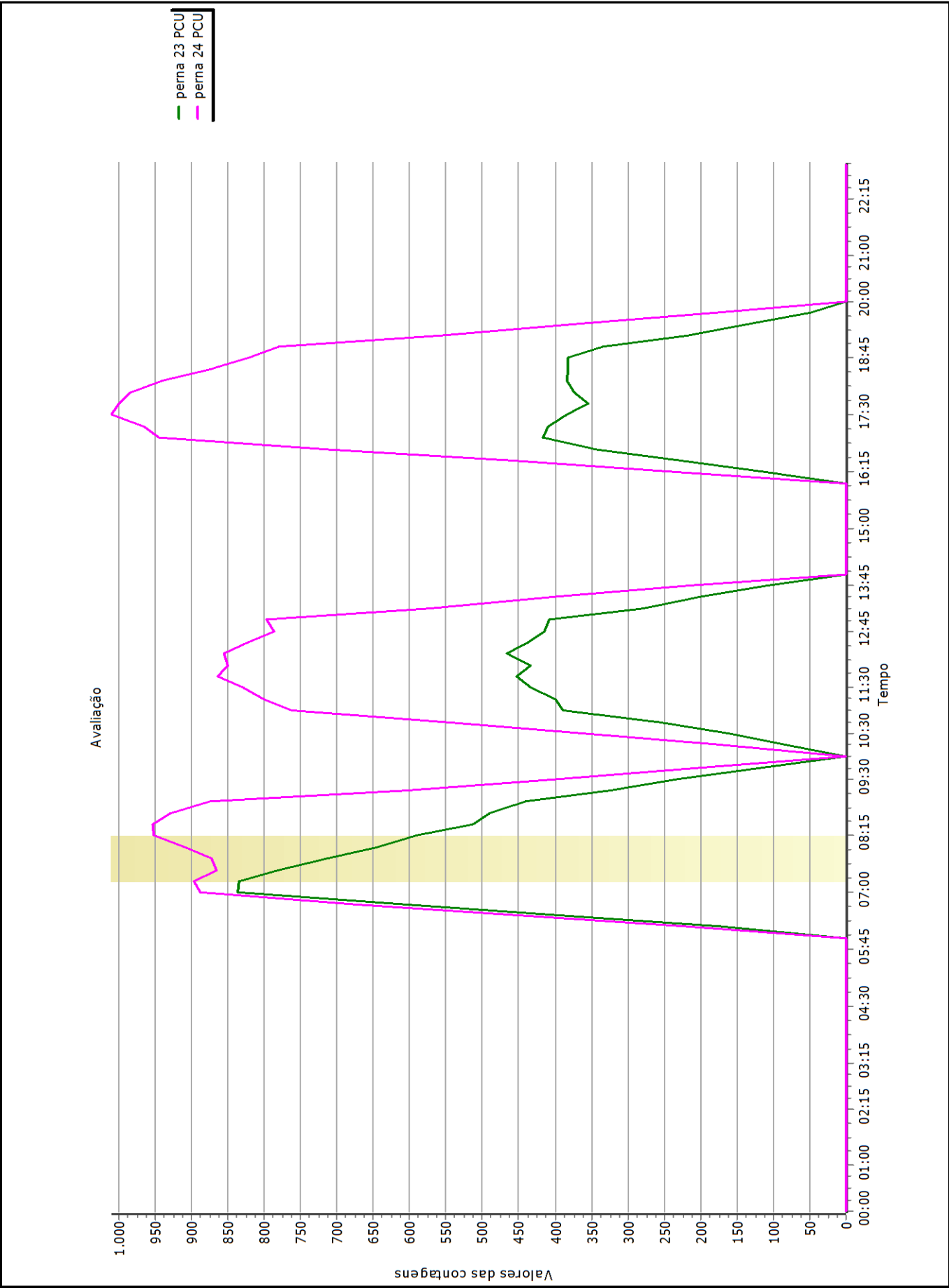
Vídeos



Movimentos Contados

- 23 > 21 Av. Dr. Manoel Afonso Ferreira em frente
- 23 > 22 Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida
- 24 > 21 R. M. Maria Santa Margarida conv à eq. Av. Dr. Manoel Afonso Ferreira
- 24 > 22 R. M. Maria Santa Margarida em frente
- 24 > 23 R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira
- 34 > 32 R. M. Maria Santa Margarida em frente
- 35 > 32 Av. Claudio Celestino Toieto Soares

Perfil Horário 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019



Perfil Horário 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

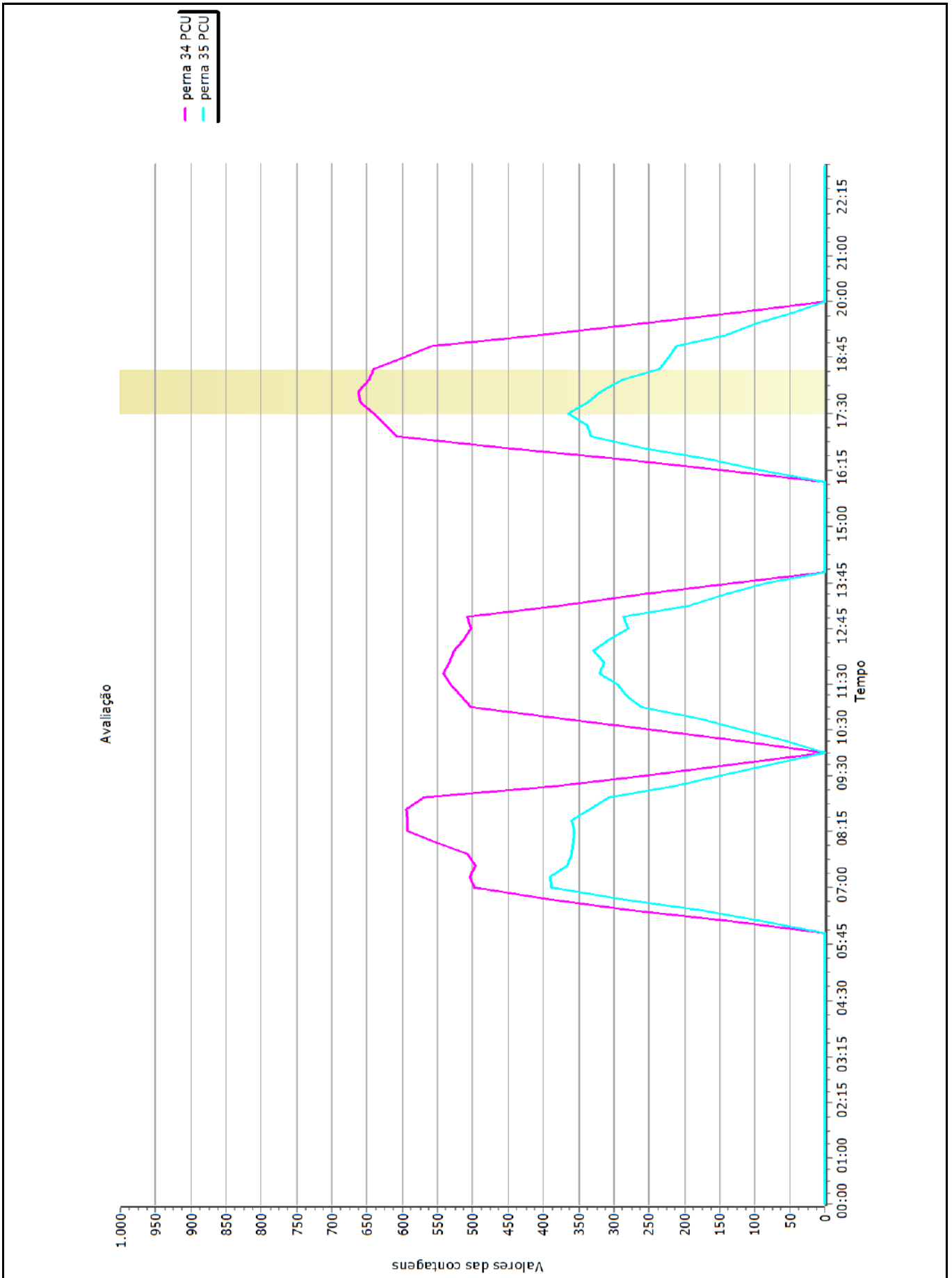
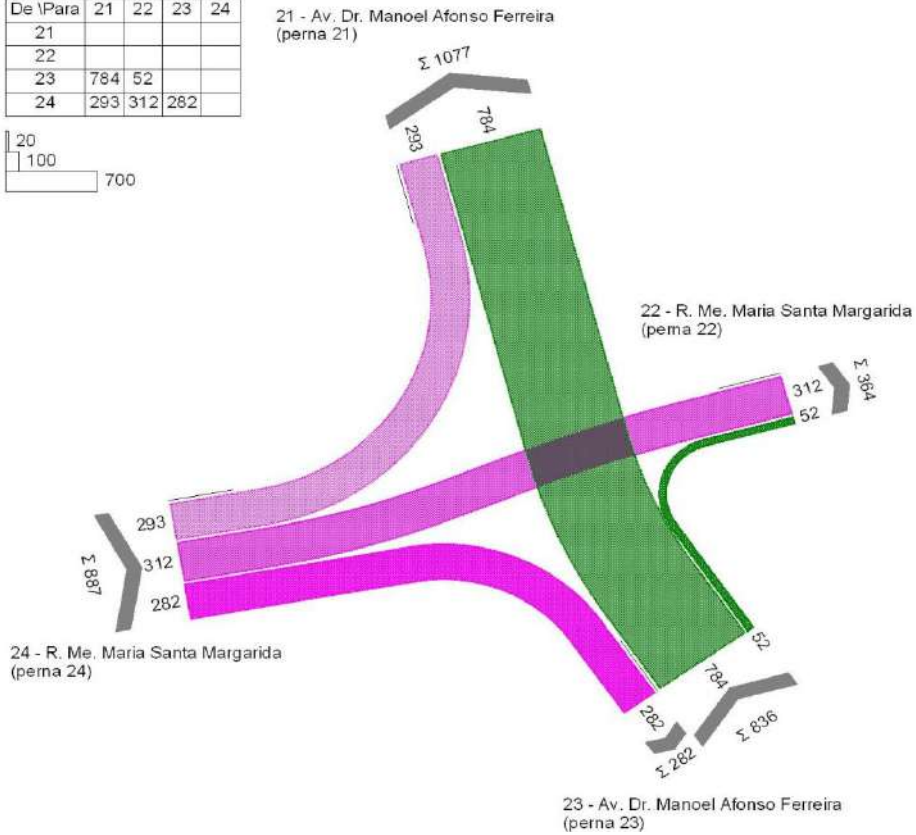


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019**

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 22.10.2019 07:00 - 22.10.2019 08:00
 1723 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 784 | 52 | | |
| 24 | 293 | 312 | 282 | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 22.10.2019 08:00 - 22.10.2019 09:00
 1556 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 609 | 37 | | |
| 24 | 438 | 182 | 290 | |

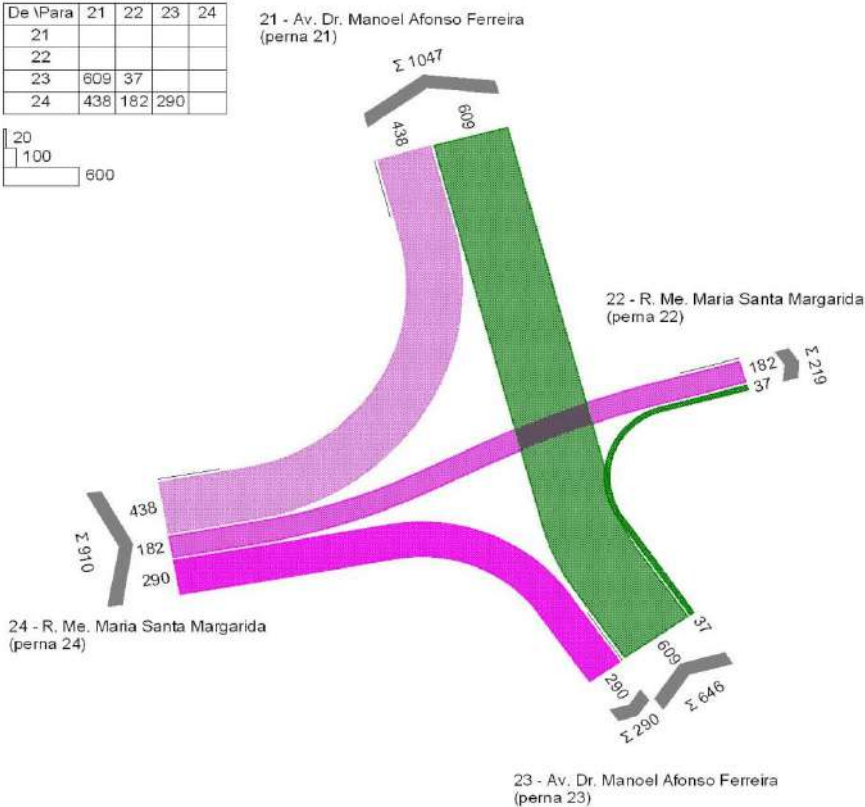
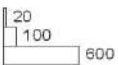
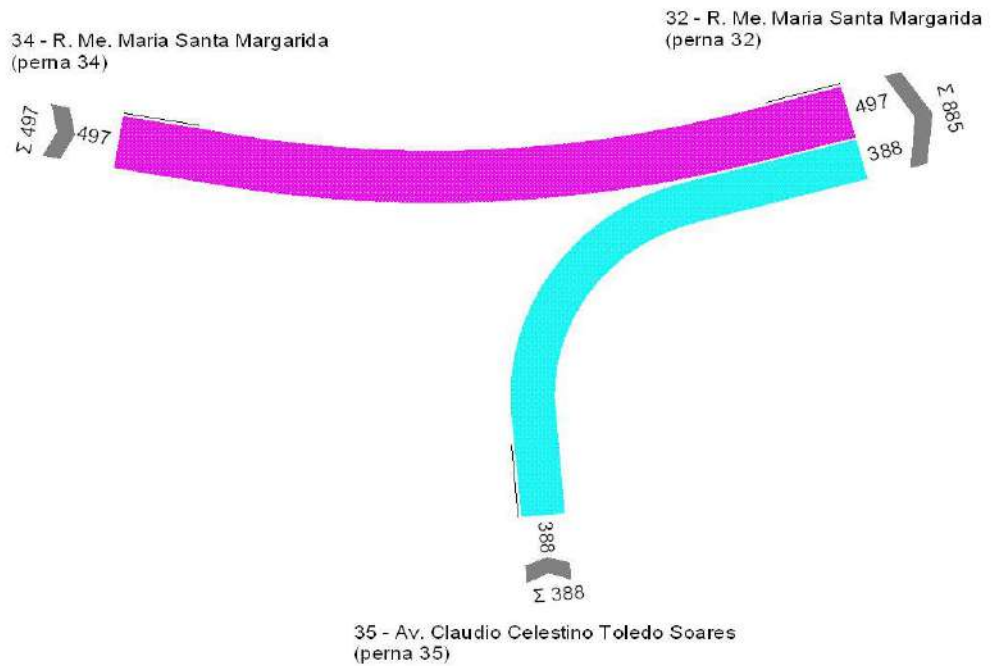


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019**

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 22.10.2019 07:00 - 22.10.2019 08:00
 885 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 497 | | |
| 35 | 388 | | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 22.10.2019 08:00 - 22.10.2019 09:00
 907 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 550 | | |
| 35 | 357 | | |

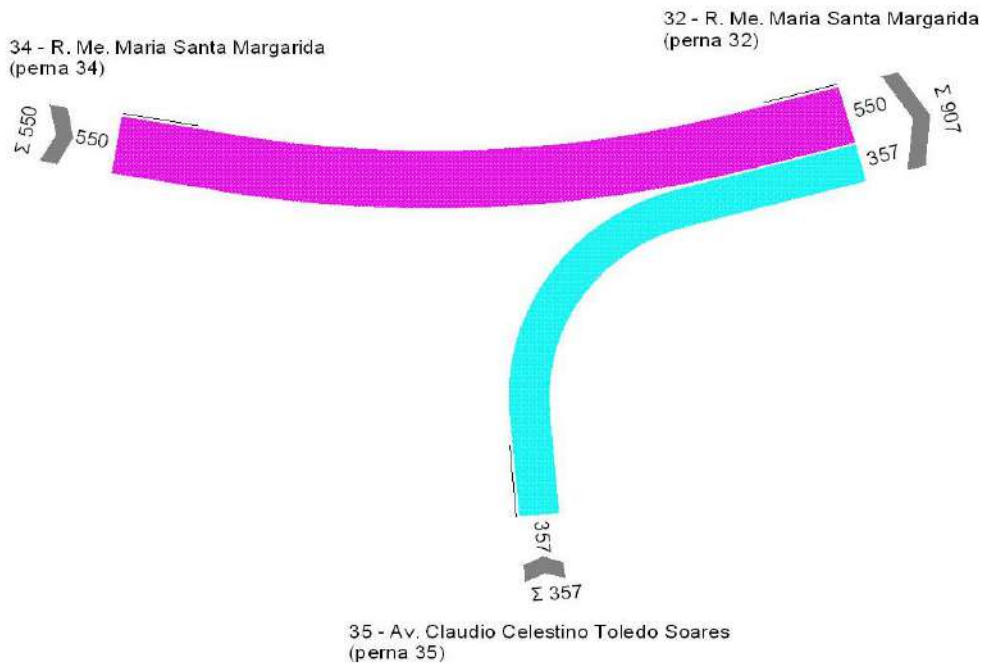
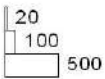


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/20

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 22.10.2019 09:00 - 22.10.2019 10:00
 1315 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 402 | 38 | | |
| 24 | 354 | 174 | 347 | |

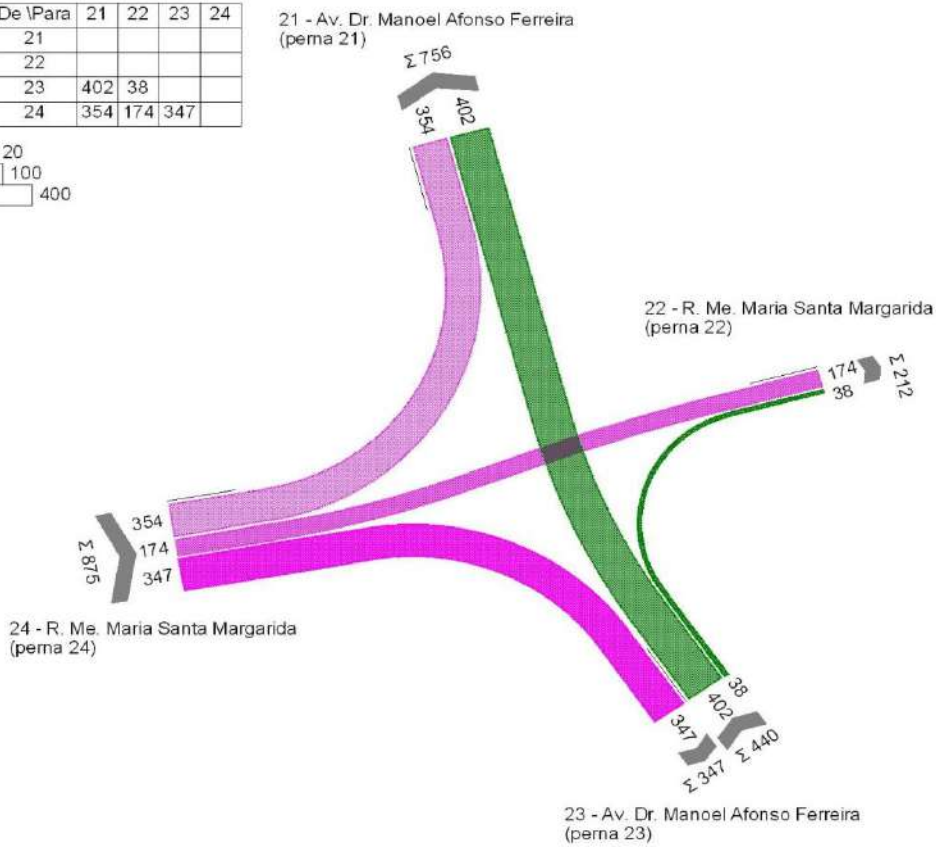


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/20

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 22.10.2019 09:00 - 22.10.2019 10:00
 875 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 569 | | |
| 35 | 306 | | |

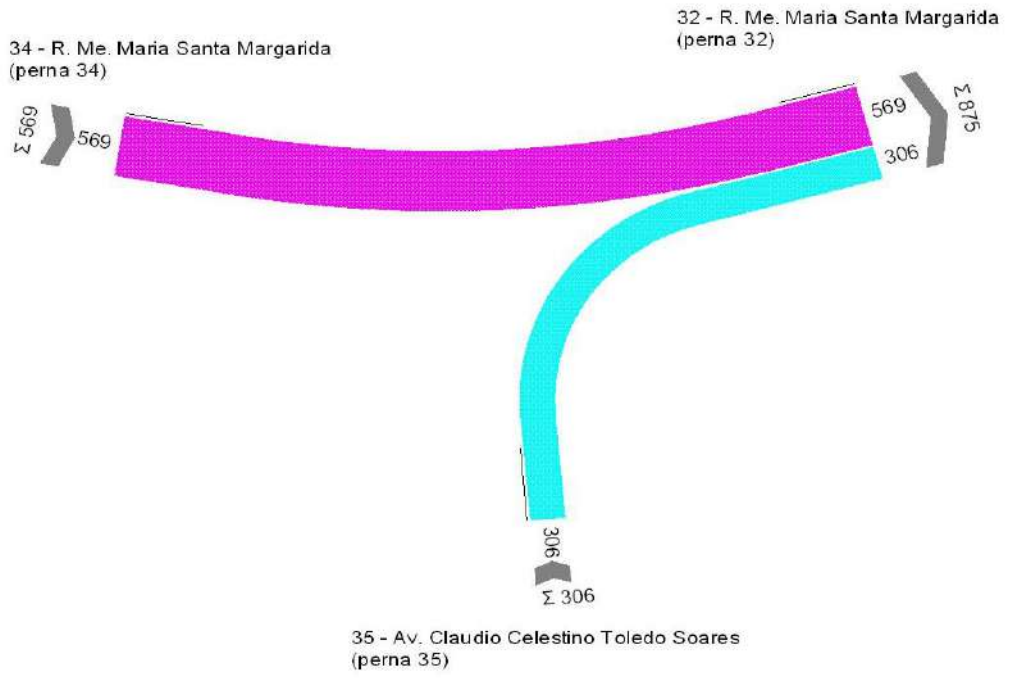
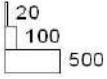
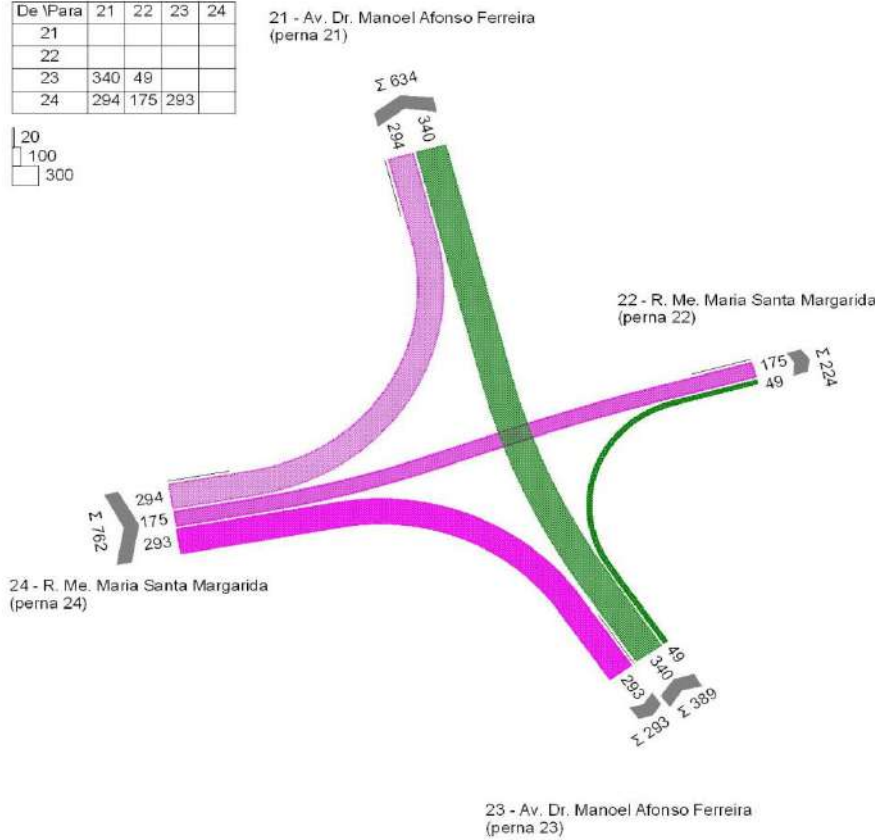


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 22.10.2019 11:00 - 22.10.2019 12:00
 1151 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 340 | 49 | | |
| 24 | 294 | 175 | 293 | |

20
 100
 300



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 22.10.2019 12:00 - 22.10.2019 13:00
 1284 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 384 | 50 | | |
| 24 | 351 | 250 | 249 | |

20
 100
 300

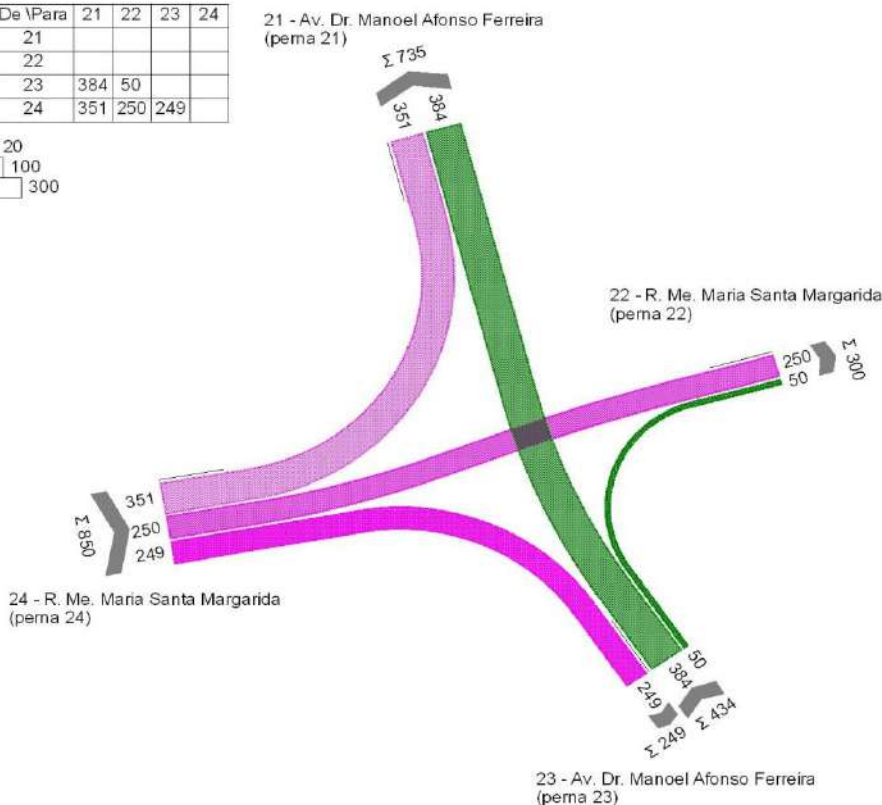
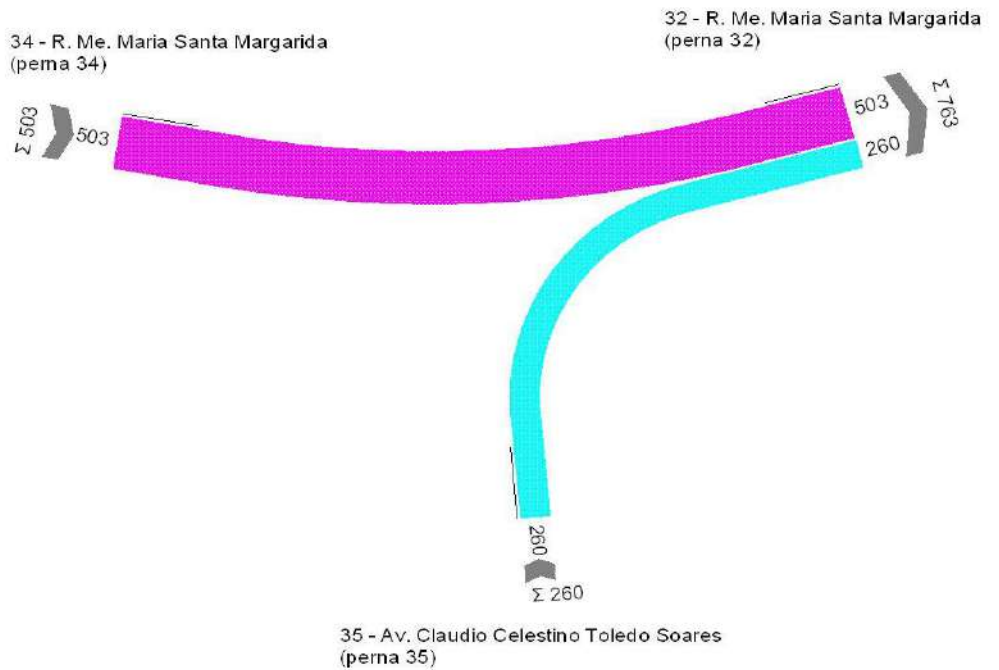
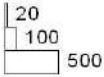


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 22.10.2019 11:00 - 22.10.2019 12:00
 763 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 503 | | |
| 35 | 260 | | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 22.10.2019 12:00 - 22.10.2019 13:00
 847 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 533 | | |
| 35 | 314 | | |

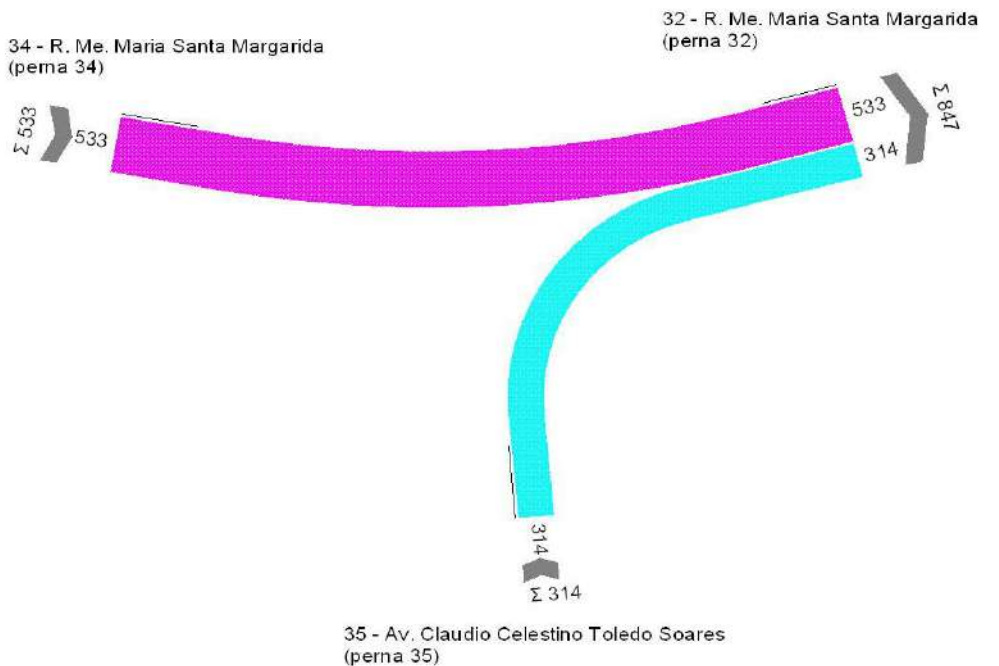
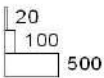


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 22.10.2019 13:00 - 22.10.2019 14:00
 1204 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 358 | 49 | | |
| 24 | 375 | 198 | 224 | |

20
 100
 300

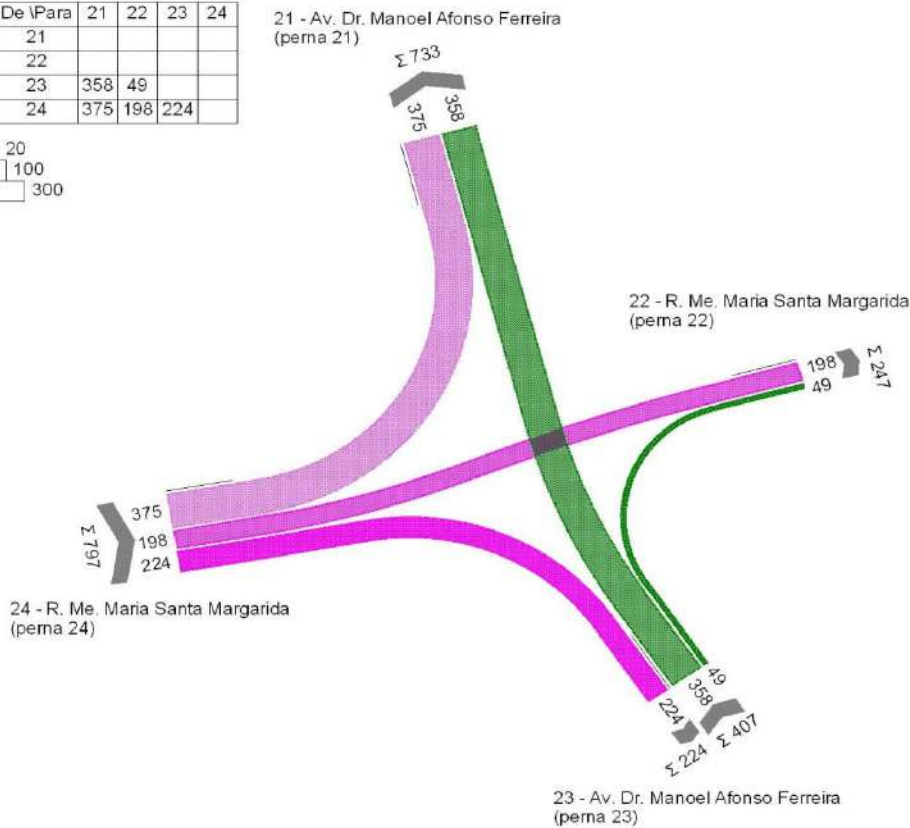


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 22.10.2019 13:00 - 22.10.2019 14:00
 794 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 508 | | |
| 35 | 286 | | |

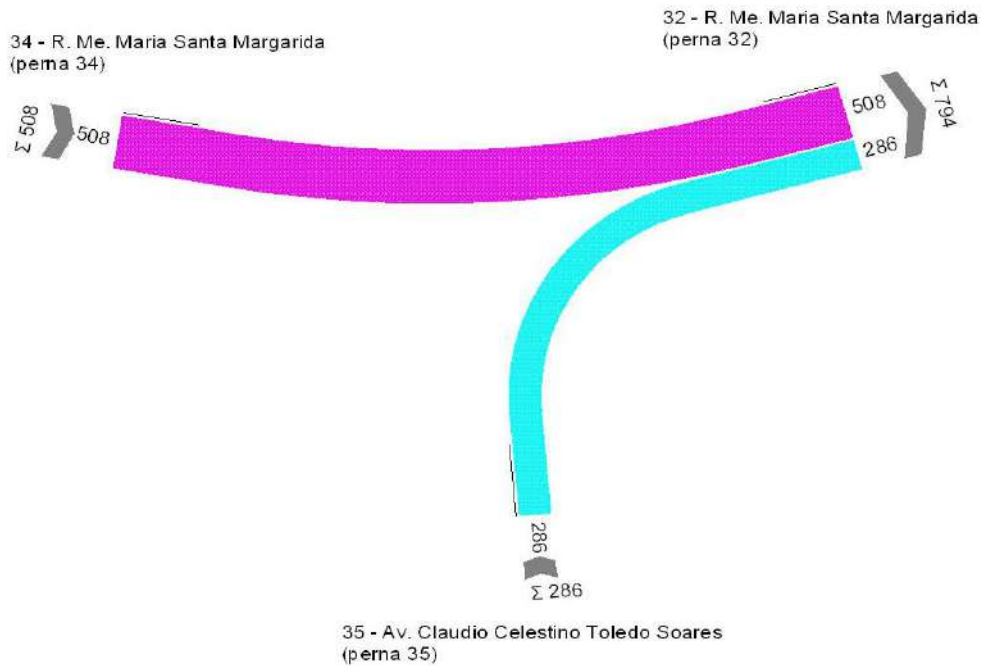
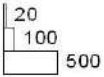
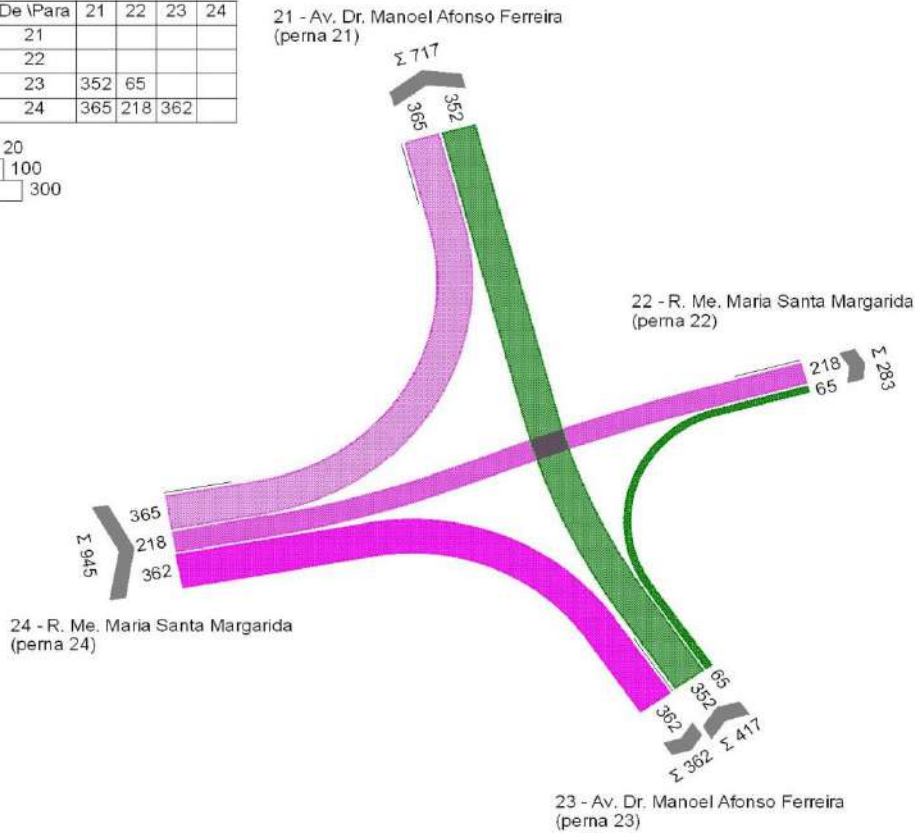


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 22.10.2019 17:00 - 22.10.2019 18:00
 1362 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 352 | 65 | | |
| 24 | 365 | 218 | 362 | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 22.10.2019 18:00 - 22.10.2019 19:00
 1357 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 320 | 53 | | |
| 24 | 358 | 174 | 452 | |

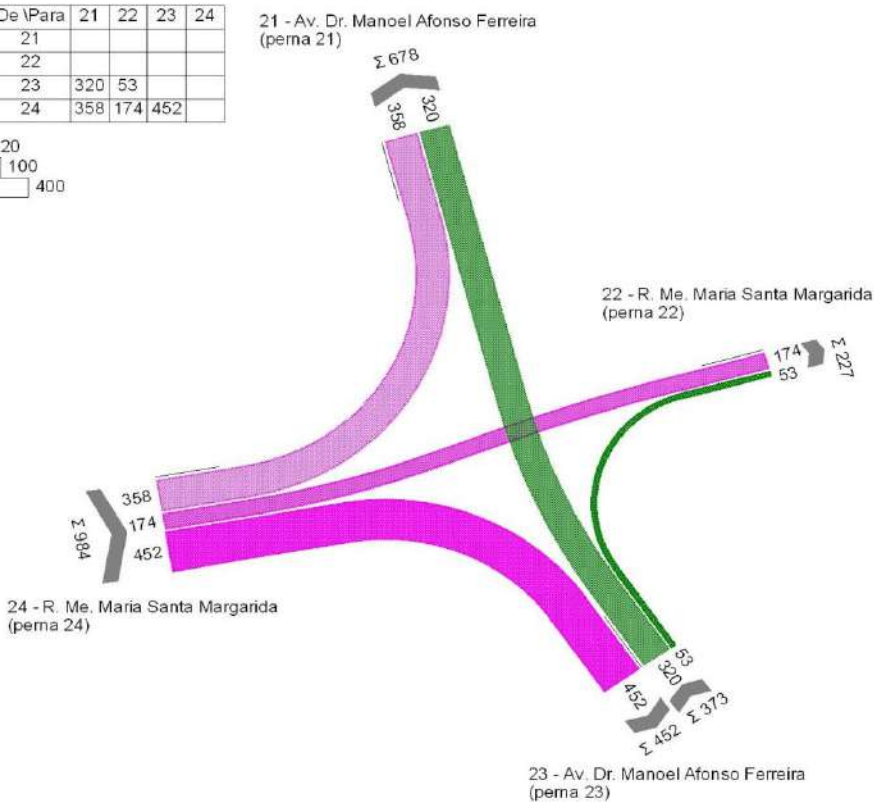
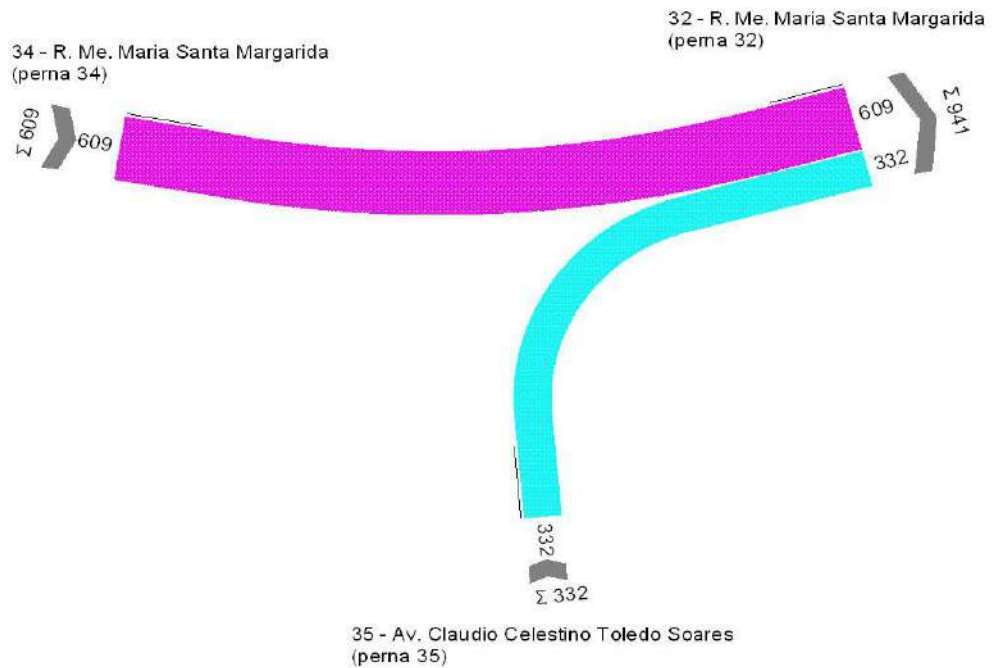
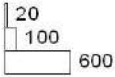


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 22.10.2019 17:00 - 22.10.2019 18:00
 941 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 609 | | |
| 35 | 332 | | |



Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 22.10.2019 18:00 - 22.10.2019 19:00
 981 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 662 | | |
| 35 | 319 | | |

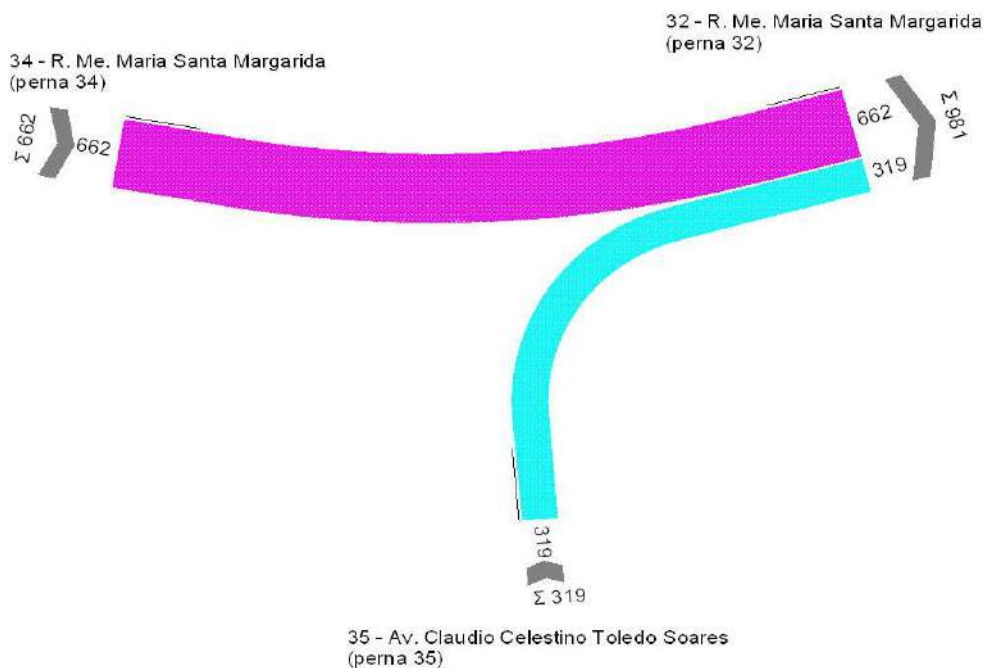
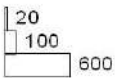


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 22.10.2019 19:00 - 22.10.2019 20:00
 1114 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 268 | 66 | | |
| 24 | 303 | 133 | 344 | |

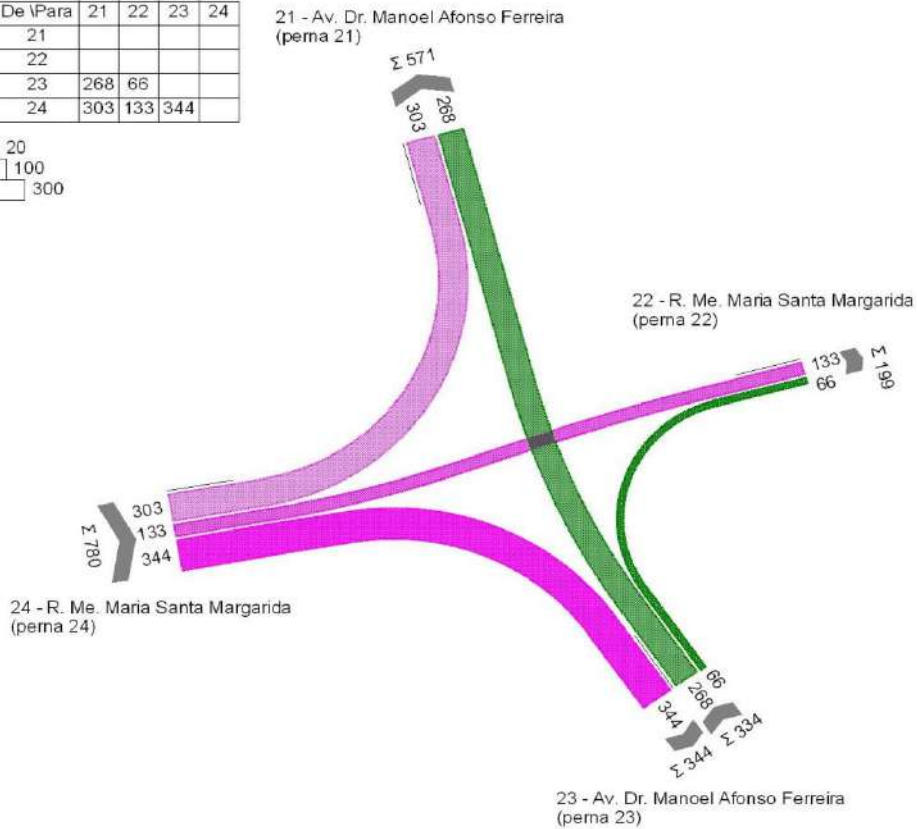
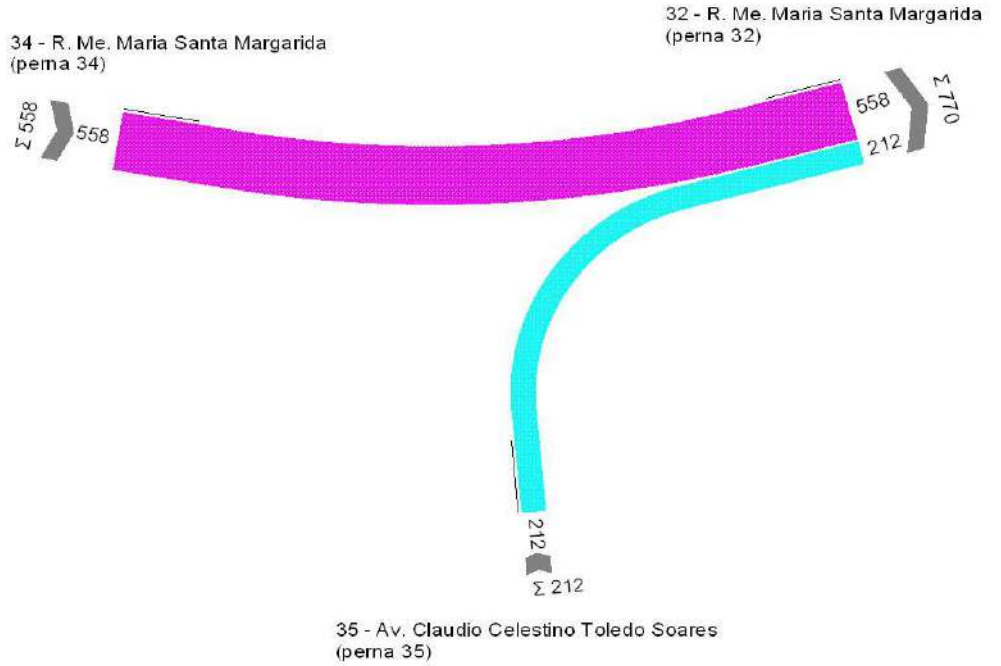
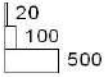


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019**

Contagem De 22-10-2019 às 00h00 até 23-10-2019 às 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 22.10.2019 19:00 - 22.10.2019 20:00
 770 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 558 | | |
| 35 | 212 | | |



PCU

003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 22/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

23 > 21 Av. Dr. Manoel Afonso Ferreira em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 740 | 0 | 13 | 6 | 0 | 785 | 759 |
| 8:00 | 9:00 | 582 | 0 | 10 | 1 | 0 | 609 | 593 |
| 9:00 | 10:00 | 375 | 0 | 11 | 0 | 0 | 403 | 386 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 294 | 0 | 16 | 3 | 0 | 340 | 313 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 377 | 0 | 3 | 0 | 0 | 385 | 380 |
| 13:00 | 14:00 | 320 | 0 | 12 | 4 | 0 | 358 | 336 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 349 | 0 | 1 | 0 | 0 | 352 | 350 |
| 18:00 | 19:00 | 314 | 0 | 1 | 2 | 0 | 321 | 317 |
| 19:00 | 20:00 | 253 | 0 | 2 | 5 | 0 | 268 | 260 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
23 > 21 Av. Dr. Manoel Afonso Ferreira em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 84 | 0 | 1 | 0 | 0 | 87 | 85 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 90 | 0 | 1 | 0 | 0 | 93 | 91 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 105 | 0 | 0 | 0 | 0 | 105 | 105 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 98 | 0 | 1 | 0 | 0 | 101 | 99 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 101 | 0 | 5 | 0 | 0 | 114 | 106 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 60 | 0 | 2 | 1 | 0 | 67 | 63 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 79 | 0 | 0 | 3 | 0 | 85 | 82 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 80 | 0 | 5 | 0 | 0 | 93 | 85 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 99 | 0 | 0 | 0 | 0 | 99 | 99 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 97 | 0 | 0 | 0 | 0 | 97 | 97 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 94 | 0 | 1 | 0 | 0 | 97 | 95 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 59 | 0 | 0 | 0 | 0 | 59 | 59 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 92 | 0 | 1 | 0 | 0 | 95 | 93 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 70 | 0 | 0 | 2 | 0 | 74 | 72 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 77 | 0 | 0 | 0 | 0 | 77 | 77 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 75 | 0 | 0 | 0 | 0 | 75 | 75 | |
| 7:00 | 7:15 | 155 | 0 | 1 | 1 | 0 | 160 | | 157 | 19:00 | 19:15 | 96 | 0 | 0 | 2 | 0 | 100 | 98 | |
| 7:15 | 7:30 | 184 | 0 | 4 | 3 | 0 | 200 | 785 | 191 | 19:15 | 19:30 | 59 | 0 | 0 | 1 | 0 | 61 | 60 | |
| 7:30 | 7:45 | 184 | 0 | 8 | 2 | 0 | 208 | | 194 | 19:30 | 19:45 | 63 | 0 | 1 | 0 | 0 | 66 | 64 | |
| 7:45 | 8:00 | 217 | 0 | 0 | 0 | 0 | 217 | | 217 | 19:45 | 20:00 | 35 | 0 | 1 | 2 | 0 | 42 | 38 | |
| 8:00 | 8:15 | 158 | 0 | 2 | 1 | 0 | 165 | | 161 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 157 | 0 | 1 | 0 | 0 | 160 | 609 | 158 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 123 | 0 | 4 | 0 | 0 | 133 | | 127 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 144 | 0 | 3 | 0 | 0 | 152 | | 147 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 105 | 0 | 3 | 0 | 0 | 113 | | 108 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 77 | 0 | 0 | 0 | 0 | 77 | 403 | 77 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 96 | 0 | 5 | 0 | 0 | 109 | | 101 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 97 | 0 | 3 | 0 | 0 | 105 | | 100 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 64 | 0 | 5 | 0 | 0 | 77 | 340 | 69 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 51 | 0 | 5 | 0 | 0 | 64 | | 56 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 75 | 0 | 2 | 0 | 0 | 80 | | 77 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 104 | 0 | 4 | 3 | 0 | 120 | | 111 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

23 > 22 Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 52 | 0 | 0 | 0 | 0 | 52 | 52 |
| 8:00 | 9:00 | 37 | 0 | 0 | 0 | 0 | 37 | 37 |
| 9:00 | 10:00 | 35 | 0 | 1 | 0 | 0 | 38 | 36 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 49 | 0 | 0 | 0 | 0 | 49 | 49 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 47 | 0 | 1 | 0 | 0 | 50 | 48 |
| 13:00 | 14:00 | 44 | 0 | 2 | 0 | 0 | 49 | 46 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 65 | 0 | 0 | 0 | 0 | 65 | 65 |
| 18:00 | 19:00 | 53 | 0 | 0 | 0 | 0 | 53 | 53 |
| 19:00 | 20:00 | 60 | 0 | 1 | 2 | 0 | 67 | 63 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
23 > 22
Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 10 | 0 | 0 | 0 | 0 | 10 | 10 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 17 | 0 | 0 | 0 | 0 | 17 | 17 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 8 | 0 | 0 | 0 | 0 | 8 | 8 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 12 | 0 | 1 | 0 | 0 | 15 | 13 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 12 | 0 | 1 | 0 | 0 | 15 | 13 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 14 | 0 | 0 | 0 | 0 | 14 | 14 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 6 | 0 | 0 | 0 | 0 | 6 | 6 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 12 | 0 | 1 | 0 | 0 | 15 | 13 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 16 | 0 | 0 | 0 | 0 | 16 | 16 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 15 | 0 | 0 | 0 | 0 | 15 | 15 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 18 | 0 | 0 | 0 | 0 | 18 | 18 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 16 | 0 | 0 | 0 | 0 | 16 | 16 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 13 | 0 | 0 | 0 | 0 | 13 | 13 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 13 | 0 | 0 | 0 | 0 | 13 | 13 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 7 | 0 | 0 | 0 | 0 | 7 | 7 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 20 | 0 | 0 | 0 | 0 | 20 | 20 |
| 7:00 | 7:15 | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 19:00 | 19:15 | 15 | 0 | 0 | 1 | 0 | 17 | 16 |
| 7:15 | 7:30 | 20 | 0 | 0 | 0 | 0 | 20 | 20 | 19:15 | 19:30 | 21 | 0 | 1 | 1 | 0 | 26 | 23 |
| 7:30 | 7:45 | 6 | 0 | 0 | 0 | 0 | 6 | 6 | 19:30 | 19:45 | 18 | 0 | 0 | 0 | 0 | 18 | 18 |
| 7:45 | 8:00 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 19:45 | 20:00 | 6 | 0 | 0 | 0 | 0 | 6 | 6 |
| 8:00 | 8:15 | 8 | 0 | 0 | 0 | 0 | 8 | 8 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 7 | 0 | 0 | 0 | 0 | 7 | 7 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 4 | 0 | 0 | 0 | 0 | 4 | 4 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 5 | 0 | 1 | 0 | 0 | 8 | 6 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 10 | 0 | 0 | 0 | 0 | 10 | 10 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

24 > 21 R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 291 | 0 | 0 | 1 | 0 | 293 | 292 |
| 8:00 | 9:00 | 435 | 0 | 1 | 0 | 0 | 438 | 436 |
| 9:00 | 10:00 | 349 | 0 | 2 | 0 | 0 | 354 | 351 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 285 | 0 | 3 | 1 | 0 | 295 | 289 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 339 | 0 | 4 | 1 | 0 | 351 | 344 |
| 13:00 | 14:00 | 365 | 0 | 4 | 0 | 0 | 375 | 369 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 355 | 0 | 4 | 0 | 0 | 365 | 359 |
| 18:00 | 19:00 | 346 | 0 | 3 | 2 | 0 | 358 | 351 |
| 19:00 | 20:00 | 286 | 0 | 6 | 1 | 0 | 303 | 293 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
24 > 21
R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 84 | 0 | 0 | 1 | 0 | 86 | | 85 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 82 | 0 | 0 | 0 | 0 | 82 | 351 | 82 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:30 | 12:45 | 83 | 0 | 2 | 0 | 0 | 88 | | 85 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 90 | 0 | 2 | 0 | 0 | 95 | | 92 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 97 | 0 | 1 | 0 | 0 | 100 | 375 | 98 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 91 | 0 | 0 | 0 | 0 | 91 | | 91 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 90 | 0 | 2 | 0 | 0 | 95 | | 92 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 87 | 0 | 1 | 0 | 0 | 90 | | 88 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 84 | 0 | 1 | 0 | 0 | 87 | 365 | 85 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 88 | 0 | 1 | 0 | 0 | 91 | | 89 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 91 | 0 | 0 | 0 | 0 | 91 | | 91 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 92 | 0 | 2 | 0 | 0 | 97 | | 94 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 93 | 0 | 0 | 1 | 0 | 95 | 358 | 94 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 88 | 0 | 1 | 0 | 0 | 91 | | 89 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 85 | 0 | 2 | 1 | 0 | 92 | | 88 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 80 | 0 | 0 | 0 | 0 | 80 | | 80 | |
| 7:00 | 7:15 | 63 | 0 | 0 | 0 | 0 | 63 | | 63 | 19:00 | 19:15 | 69 | 0 | 1 | 0 | 0 | 72 | 303 | 70 | |
| 7:15 | 7:30 | 70 | 0 | 0 | 0 | 0 | 70 | | 70 | 19:15 | 19:30 | 71 | 0 | 2 | 0 | 0 | 76 | | 73 | |
| 7:30 | 7:45 | 71 | 0 | 0 | 1 | 0 | 73 | | 72 | 19:30 | 19:45 | 75 | 0 | 1 | 1 | 0 | 80 | | 77 | |
| 7:45 | 8:00 | 87 | 0 | 0 | 0 | 0 | 87 | | 87 | 19:45 | 20:00 | 71 | 0 | 2 | 0 | 0 | 76 | | 73 | |
| 8:00 | 8:15 | 90 | 0 | 0 | 0 | 0 | 90 | | 90 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 101 | 0 | 0 | 0 | 0 | 101 | | 101 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 123 | 0 | 1 | 0 | 0 | 126 | | 124 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 121 | 0 | 0 | 0 | 0 | 121 | | 121 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:00 | 9:15 | 105 | 0 | 1 | 0 | 0 | 108 | | 106 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:15 | 9:30 | 90 | 0 | 1 | 0 | 0 | 93 | | 91 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 79 | 0 | 0 | 0 | 0 | 79 | | 79 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 75 | 0 | 0 | 0 | 0 | 75 | | 75 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 62 | 0 | 0 | 0 | 0 | 62 | | 62 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 70 | 0 | 1 | 1 | 0 | 75 | | 72 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 73 | 0 | 1 | 0 | 0 | 76 | | 74 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 80 | 0 | 1 | 0 | 0 | 83 | | 81 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

24 > 22 R. M. Maria Santa Margarida em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 296 | 0 | 4 | 3 | 0 | 312 | 303 |
| 8:00 | 9:00 | 169 | 0 | 5 | 0 | 0 | 182 | 174 |
| 9:00 | 10:00 | 156 | 0 | 7 | 0 | 0 | 174 | 163 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 170 | 0 | 2 | 0 | 0 | 175 | 172 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 237 | 0 | 5 | 0 | 0 | 250 | 242 |
| 13:00 | 14:00 | 193 | 0 | 1 | 1 | 0 | 198 | 195 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 214 | 0 | 1 | 1 | 0 | 219 | 216 |
| 18:00 | 19:00 | 172 | 0 | 1 | 0 | 0 | 175 | 173 |
| 19:00 | 20:00 | 133 | 0 | 0 | 0 | 0 | 133 | 133 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
24 > 22
R. M. Maria Santa Margarida em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 60 | 0 | 1 | 0 | 0 | 63 | | 61 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 59 | 0 | 0 | 0 | 0 | 59 | 250 | 59 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 57 | 0 | 3 | 0 | 0 | 65 | | 60 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 61 | 0 | 1 | 0 | 0 | 64 | | 62 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 58 | 0 | 1 | 1 | 0 | 63 | 198 | 60 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 41 | 0 | 0 | 0 | 0 | 41 | | 41 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 42 | 0 | 0 | 0 | 0 | 42 | | 42 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 52 | 0 | 0 | 0 | 0 | 52 | | 52 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 54 | 0 | 1 | 0 | 0 | 57 | 219 | 55 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 48 | 0 | 0 | 0 | 0 | 48 | | 48 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 57 | 0 | 0 | 1 | 0 | 59 | | 58 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 55 | 0 | 0 | 0 | 0 | 55 | | 55 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 44 | 0 | 0 | 0 | 0 | 44 | 175 | 44 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 50 | 0 | 0 | 0 | 0 | 50 | | 50 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 38 | 0 | 0 | 0 | 0 | 38 | | 38 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 40 | 0 | 1 | 0 | 0 | 43 | | 41 |
| 7:00 | 7:15 | 119 | 0 | 0 | 0 | 0 | 119 | | 119 | 19:00 | 19:15 | 35 | 0 | 0 | 0 | 0 | 35 | 133 | 35 |
| 7:15 | 7:30 | 67 | 0 | 1 | 1 | 0 | 72 | 312 | 69 | 19:15 | 19:30 | 34 | 0 | 0 | 0 | 0 | 34 | | 34 |
| 7:30 | 7:45 | 62 | 0 | 2 | 1 | 0 | 69 | | 65 | 19:30 | 19:45 | 40 | 0 | 0 | 0 | 0 | 40 | | 40 |
| 7:45 | 8:00 | 48 | 0 | 1 | 1 | 0 | 53 | | 50 | 19:45 | 20:00 | 24 | 0 | 0 | 0 | 0 | 24 | | 24 |
| 8:00 | 8:15 | 61 | 0 | 0 | 0 | 0 | 61 | | 61 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 30 | 0 | 2 | 0 | 0 | 35 | 182 | 32 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 40 | 0 | 1 | 0 | 0 | 43 | | 41 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 38 | 0 | 2 | 0 | 0 | 43 | | 40 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 40 | 0 | 1 | 0 | 0 | 43 | | 41 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 43 | 0 | 2 | 0 | 0 | 48 | 174 | 45 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 47 | 0 | 2 | 0 | 0 | 52 | | 49 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 26 | 0 | 2 | 0 | 0 | 31 | | 28 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 33 | 0 | 0 | 0 | 0 | 33 | | 33 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 36 | 0 | 0 | 0 | 0 | 36 | 175 | 36 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 46 | 0 | 0 | 0 | 0 | 46 | | 46 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 55 | 0 | 2 | 0 | 0 | 60 | | 57 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

24 > 23 R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 258 | 0 | 5 | 6 | 0 | 283 | 269 |
| 8:00 | 9:00 | 266 | 0 | 8 | 2 | 0 | 290 | 276 |
| 9:00 | 10:00 | 304 | 0 | 14 | 4 | 0 | 347 | 322 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 239 | 0 | 20 | 2 | 0 | 293 | 261 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 217 | 0 | 12 | 1 | 0 | 249 | 230 |
| 13:00 | 14:00 | 204 | 0 | 7 | 1 | 0 | 224 | 212 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 351 | 0 | 1 | 4 | 0 | 362 | 356 |
| 18:00 | 19:00 | 433 | 0 | 1 | 8 | 0 | 452 | 442 |
| 19:00 | 20:00 | 300 | 0 | 4 | 17 | 0 | 344 | 321 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
24 > 23
R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 60 | 0 | 3 | 0 | 0 | 68 | 63 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 64 | 0 | 3 | 0 | 0 | 72 | 67 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 51 | 0 | 5 | 1 | 0 | 66 | 57 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 42 | 0 | 1 | 0 | 0 | 45 | 43 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 56 | 0 | 2 | 0 | 0 | 61 | 58 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 46 | 0 | 0 | 0 | 0 | 46 | 46 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 42 | 0 | 1 | 0 | 0 | 45 | 43 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 60 | 0 | 4 | 1 | 0 | 72 | 65 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 98 | 0 | 0 | 1 | 0 | 100 | 99 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 73 | 0 | 0 | 2 | 0 | 77 | 75 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 100 | 0 | 1 | 0 | 0 | 103 | 101 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 80 | 0 | 0 | 1 | 0 | 82 | 81 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 119 | 0 | 1 | 2 | 0 | 126 | 122 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 118 | 0 | 0 | 0 | 0 | 118 | 118 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 111 | 0 | 0 | 1 | 0 | 113 | 112 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 85 | 0 | 0 | 5 | 0 | 95 | 90 |
| 7:00 | 7:15 | 33 | 0 | 1 | 2 | 0 | 40 | 36 | 19:00 | 19:15 | 93 | 0 | 1 | 9 | 0 | 114 | 103 |
| 7:15 | 7:30 | 74 | 0 | 2 | 4 | 0 | 87 | 80 | 19:15 | 19:30 | 68 | 0 | 2 | 6 | 0 | 85 | 76 |
| 7:30 | 7:45 | 80 | 0 | 2 | 0 | 0 | 85 | 82 | 19:30 | 19:45 | 68 | 0 | 0 | 0 | 0 | 68 | 68 |
| 7:45 | 8:00 | 71 | 0 | 0 | 0 | 0 | 71 | 71 | 19:45 | 20:00 | 71 | 0 | 1 | 2 | 0 | 78 | 74 |
| 8:00 | 8:15 | 70 | 0 | 2 | 2 | 0 | 79 | 74 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 63 | 0 | 0 | 0 | 0 | 63 | 63 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 54 | 0 | 4 | 0 | 0 | 64 | 58 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 79 | 0 | 2 | 0 | 0 | 84 | 81 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 111 | 0 | 3 | 2 | 0 | 123 | 116 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 54 | 0 | 1 | 2 | 0 | 61 | 57 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 69 | 0 | 3 | 0 | 0 | 77 | 72 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 70 | 0 | 7 | 0 | 0 | 88 | 77 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 64 | 0 | 8 | 0 | 0 | 84 | 72 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 58 | 0 | 5 | 1 | 0 | 73 | 64 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 54 | 0 | 3 | 0 | 0 | 62 | 57 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 63 | 0 | 4 | 1 | 0 | 75 | 68 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

34 > 32 R. M. Maria Santa Margarida em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | | |
|---------------|-------|-----|-----|---|-------|-----|---|-----|-----|
| Período de | | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | | 482 | 0 | 2 | 5 | 0 | 497 | 489 |
| 8:00 | 9:00 | | 528 | 0 | 7 | 2 | 0 | 550 | 537 |
| 9:00 | 10:00 | | 526 | 0 | 14 | 4 | 0 | 569 | 544 |
| 10:00 | 11:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | | 461 | 0 | 16 | 1 | 0 | 503 | 478 |

| Período Tarde | | | | | | | | | |
|---------------|-------|-----|-----|---|-------|-----|---|-----|-----|
| Período de | | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | | 503 | 0 | 12 | 0 | 0 | 533 | 515 |
| 13:00 | 14:00 | | 491 | 0 | 6 | 1 | 0 | 508 | 498 |
| 14:00 | 15:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | | 591 | 0 | 4 | 4 | 0 | 609 | 599 |
| 18:00 | 19:00 | | 632 | 0 | 4 | 10 | 0 | 662 | 646 |
| 19:00 | 20:00 | | 509 | 0 | 6 | 17 | 0 | 558 | 532 |
| 20:00 | 21:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|--|
| Movimento Contado | |
| 34 > 32 | R. M. Maria Santa Margarida em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|---------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de | | Car | - | Truck | Bus | - | PCU | | VEC | Período de | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 131 | 0 | 2 | 0 | 0 | 136 | 133 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 132 | 0 | 2 | 0 | 0 | 137 | 134 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 122 | 0 | 5 | 0 | 0 | 135 | 127 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 118 | 0 | 3 | 0 | 0 | 126 | 121 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 125 | 0 | 2 | 0 | 0 | 130 | 127 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 123 | 0 | 0 | 0 | 0 | 123 | 123 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 122 | 0 | 1 | 0 | 0 | 125 | 123 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 121 | 0 | 3 | 1 | 0 | 131 | 125 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 144 | 0 | 1 | 1 | 0 | 149 | 146 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 138 | 0 | 0 | 2 | 0 | 142 | 140 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 156 | 0 | 1 | 0 | 0 | 159 | 157 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 153 | 0 | 2 | 1 | 0 | 160 | 156 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 155 | 0 | 1 | 3 | 0 | 164 | 159 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 158 | 0 | 0 | 0 | 0 | 158 | 158 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 169 | 0 | 2 | 2 | 0 | 178 | 173 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 150 | 0 | 1 | 5 | 0 | 163 | 156 | |
| 7:00 | 7:15 | 129 | 0 | 0 | 2 | 0 | 133 | 131 | 489 | 19:00 | 19:15 | 129 | 0 | 2 | 8 | 0 | 150 | 139 | |
| 7:15 | 7:30 | 133 | 0 | 1 | 3 | 0 | 142 | 137 | 489 | 19:15 | 19:30 | 128 | 0 | 4 | 6 | 0 | 150 | 138 | |
| 7:30 | 7:45 | 116 | 0 | 0 | 0 | 0 | 116 | 116 | 489 | 19:30 | 19:45 | 131 | 0 | 0 | 1 | 0 | 133 | 132 | |
| 7:45 | 8:00 | 104 | 0 | 1 | 0 | 0 | 107 | 105 | 489 | 19:45 | 20:00 | 121 | 0 | 0 | 2 | 0 | 125 | 123 | |
| 8:00 | 8:15 | 131 | 0 | 2 | 2 | 0 | 140 | 135 | 537 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 130 | 0 | 1 | 0 | 0 | 133 | 131 | 537 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 124 | 0 | 2 | 0 | 0 | 129 | 126 | 537 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 143 | 0 | 2 | 0 | 0 | 148 | 145 | 537 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 169 | 0 | 4 | 2 | 0 | 183 | 175 | 544 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 124 | 0 | 2 | 2 | 0 | 133 | 128 | 544 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 126 | 0 | 2 | 0 | 0 | 131 | 128 | 544 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 107 | 0 | 6 | 0 | 0 | 122 | 113 | 544 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 110 | 0 | 5 | 0 | 0 | 123 | 115 | 478 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 112 | 0 | 3 | 1 | 0 | 122 | 116 | 478 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 117 | 0 | 3 | 0 | 0 | 125 | 120 | 478 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 122 | 0 | 5 | 0 | 0 | 135 | 127 | 478 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

35 > 32 Av. Claudio Celestino Toledo Soares



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 363 | 0 | 7 | 4 | 0 | 389 | 374 |
| 8:00 | 9:00 | 342 | 0 | 6 | 0 | 0 | 357 | 348 |
| 9:00 | 10:00 | 283 | 0 | 9 | 0 | 0 | 306 | 292 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 233 | 0 | 9 | 2 | 0 | 260 | 244 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 290 | 0 | 9 | 1 | 0 | 315 | 300 |
| 13:00 | 14:00 | 271 | 0 | 6 | 0 | 0 | 286 | 277 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 329 | 0 | 1 | 0 | 0 | 332 | 330 |
| 18:00 | 19:00 | 319 | 0 | 0 | 0 | 0 | 319 | 319 |
| 19:00 | 20:00 | 210 | 0 | 0 | 1 | 0 | 212 | 211 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
35 > 32 Av. Claudio Celestino Toletto Soares

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 73 | 0 | 2 | 0 | 0 | 78 | 75 | 0 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 73 | 0 | 1 | 0 | 0 | 76 | 74 | 0 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 69 | 0 | 5 | 1 | 0 | 84 | 75 | 0 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 75 | 0 | 1 | 0 | 0 | 78 | 76 | 0 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 86 | 0 | 2 | 0 | 0 | 91 | 88 | 0 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 55 | 0 | 0 | 0 | 0 | 55 | 55 | 0 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 52 | 0 | 2 | 0 | 0 | 57 | 54 | 0 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 78 | 0 | 2 | 0 | 0 | 83 | 80 | 0 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 92 | 0 | 1 | 0 | 0 | 95 | 93 | 0 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 71 | 0 | 0 | 0 | 0 | 71 | 71 | 0 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 92 | 0 | 0 | 0 | 0 | 92 | 92 | 0 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 74 | 0 | 0 | 0 | 0 | 74 | 74 | 0 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 101 | 0 | 0 | 0 | 0 | 101 | 101 | 0 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 98 | 0 | 0 | 0 | 0 | 98 | 98 | 0 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 65 | 0 | 0 | 0 | 0 | 65 | 65 | 0 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 55 | 0 | 0 | 0 | 0 | 55 | 55 | 0 |
| 7:00 | 7:15 | 86 | 0 | 1 | 0 | 0 | 89 | 87 | 389 | 19:00 | 19:15 | 68 | 0 | 0 | 1 | 0 | 70 | 69 | 0 |
| 7:15 | 7:30 | 78 | 0 | 2 | 2 | 0 | 87 | 82 | 374 | 19:15 | 19:30 | 45 | 0 | 0 | 0 | 0 | 45 | 45 | 0 |
| 7:30 | 7:45 | 97 | 0 | 4 | 2 | 0 | 111 | 103 | 374 | 19:30 | 19:45 | 52 | 0 | 0 | 0 | 0 | 52 | 52 | 0 |
| 7:45 | 8:00 | 102 | 0 | 0 | 0 | 0 | 102 | 102 | 374 | 19:45 | 20:00 | 45 | 0 | 0 | 0 | 0 | 45 | 45 | 0 |
| 8:00 | 8:15 | 90 | 0 | 0 | 0 | 0 | 90 | 90 | 348 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 64 | 0 | 0 | 0 | 0 | 64 | 64 | 348 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 93 | 0 | 4 | 0 | 0 | 103 | 97 | 348 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 95 | 0 | 2 | 0 | 0 | 100 | 97 | 348 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 87 | 0 | 1 | 0 | 0 | 90 | 88 | 292 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 63 | 0 | 2 | 0 | 0 | 68 | 65 | 292 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 69 | 0 | 3 | 0 | 0 | 77 | 72 | 292 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 64 | 0 | 3 | 0 | 0 | 72 | 67 | 292 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 49 | 0 | 3 | 0 | 0 | 57 | 52 | 260 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 52 | 0 | 3 | 1 | 0 | 62 | 56 | 260 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 56 | 0 | 1 | 0 | 0 | 59 | 57 | 260 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 76 | 0 | 2 | 1 | 0 | 83 | 79 | 260 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

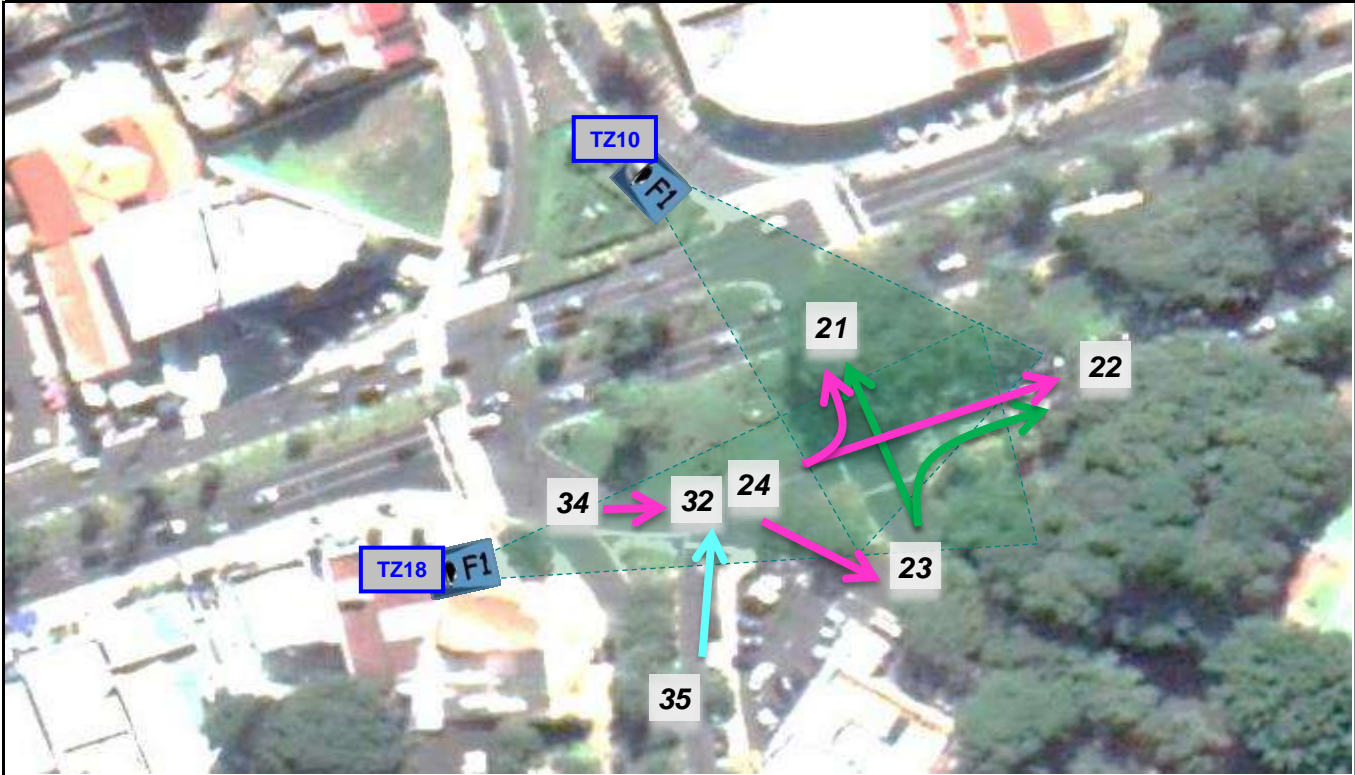
003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira

Ref.: RT-AAP.001-3J21-003_20191023_B

Campinas - SP

Novembro de 2019

Croquis **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019**



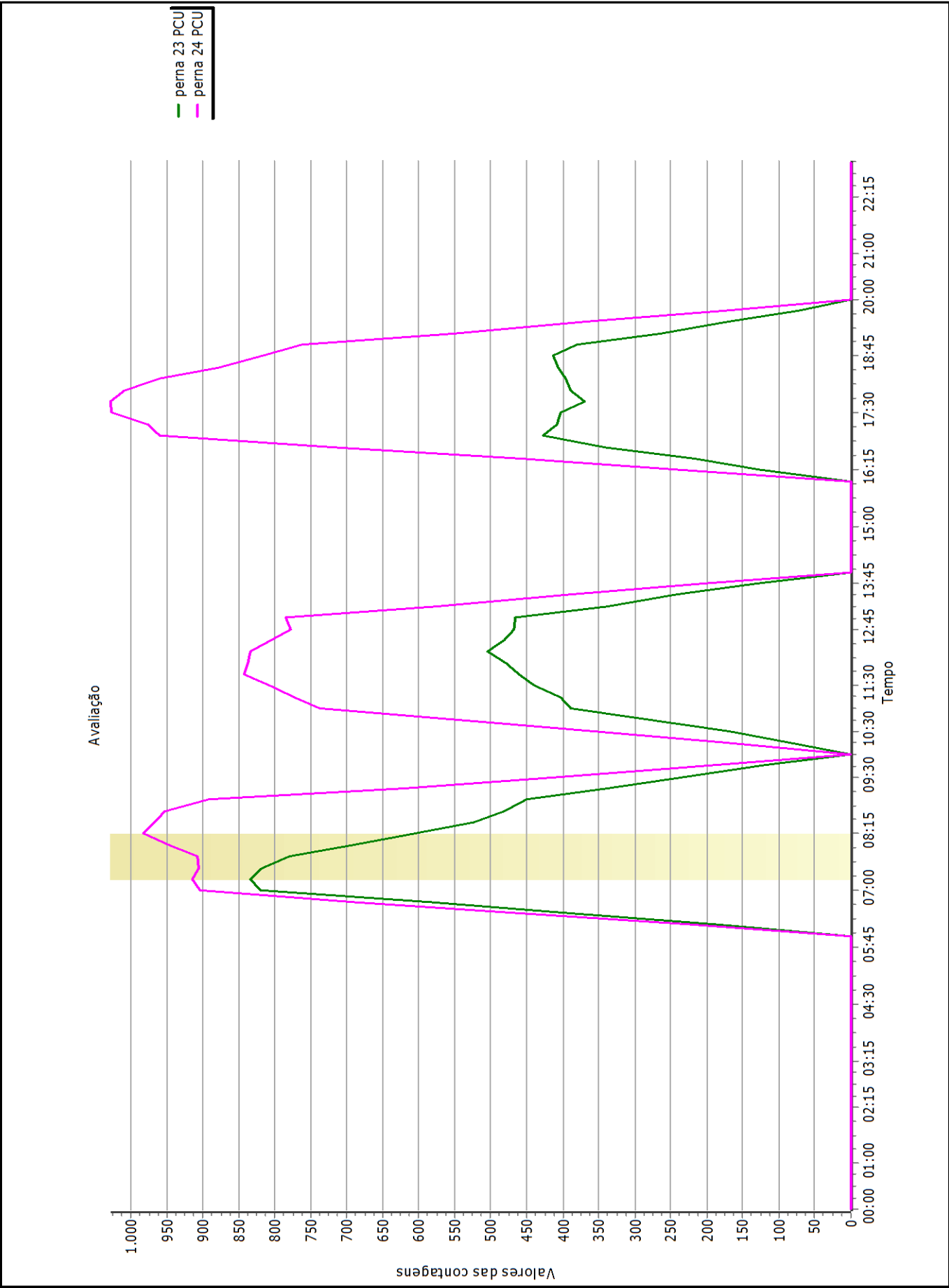
Vídeos



Movimentos Contados

- 23 > 21 Av. Dr. Manoel Afonso Ferreira em frente
- 23 > 22 Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida
- 24 > 21 R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira
- 24 > 22 R. M. Maria Santa Margarida em frente
- 24 > 23 R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira
- 34 > 32 R. M. Maria Santa Margarida em frente
- 35 > 32 Av. Claudio Celestino Toieto Soares

Perfil Horário 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019



Perfil Horário 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

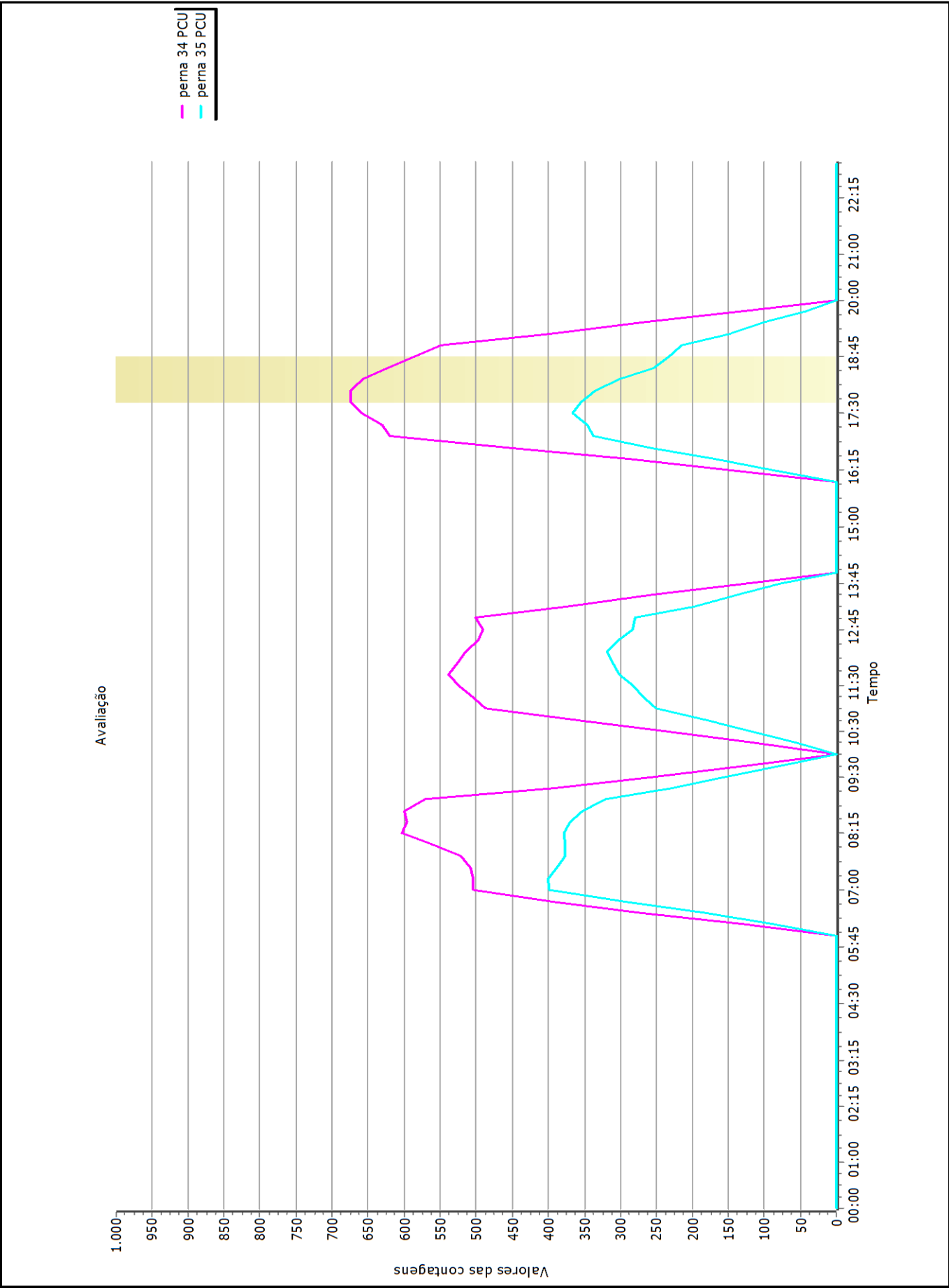
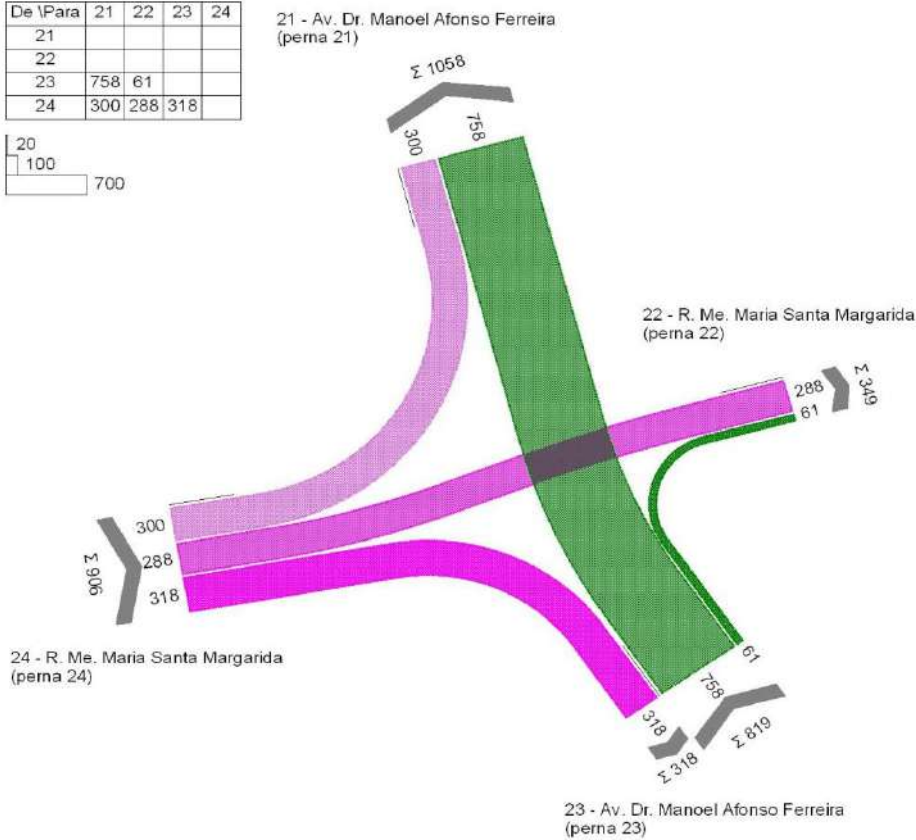
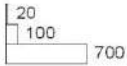


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019**

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 23.10.2019 07:00 - 23.10.2019 08:00
 1725 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 758 | 61 | | |
| 24 | 300 | 288 | 318 | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 23.10.2019 08:00 - 23.10.2019 09:00
 1638 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 642 | 52 | | |
| 24 | 448 | 190 | 306 | |

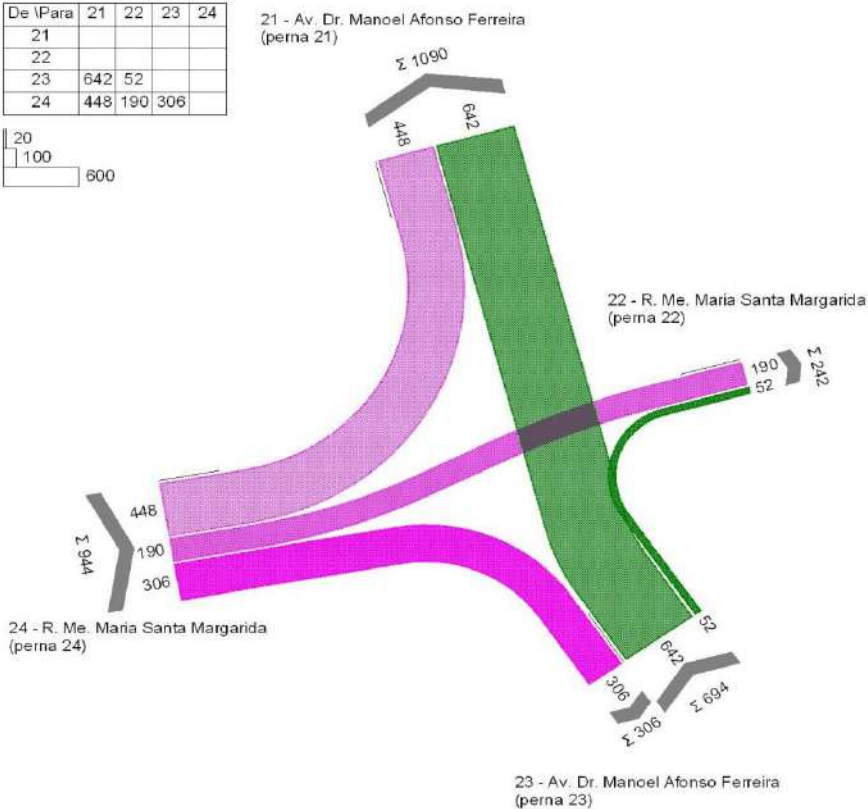
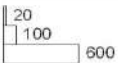
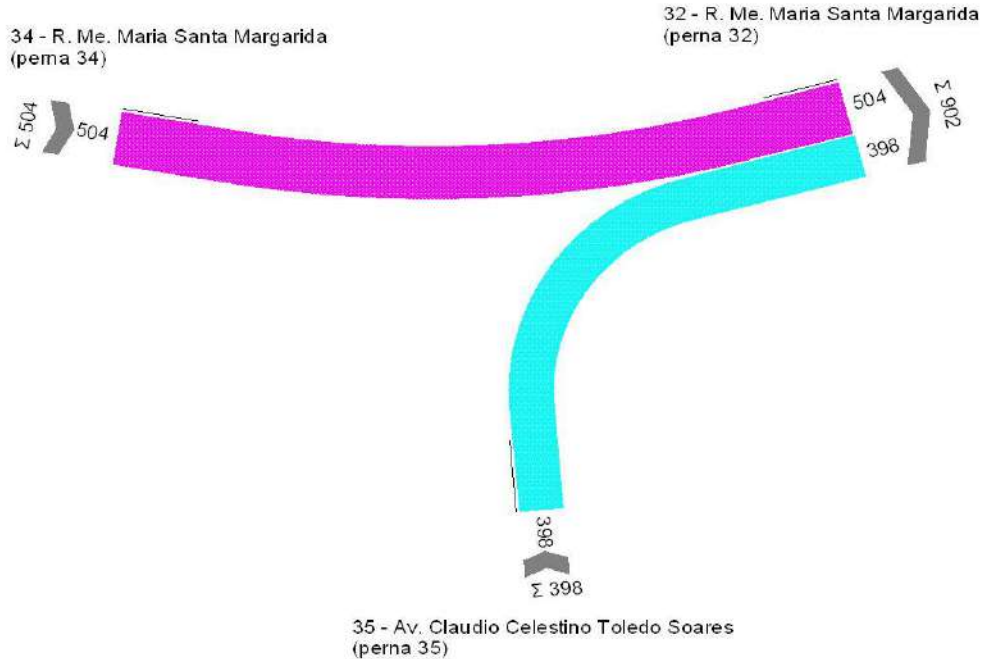
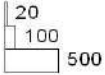


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019**

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 23.10.2019 07:00 - 23.10.2019 08:00
 902 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 504 | | |
| 35 | 398 | | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 23.10.2019 08:00 - 23.10.2019 09:00
 935 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 558 | | |
| 35 | 377 | | |

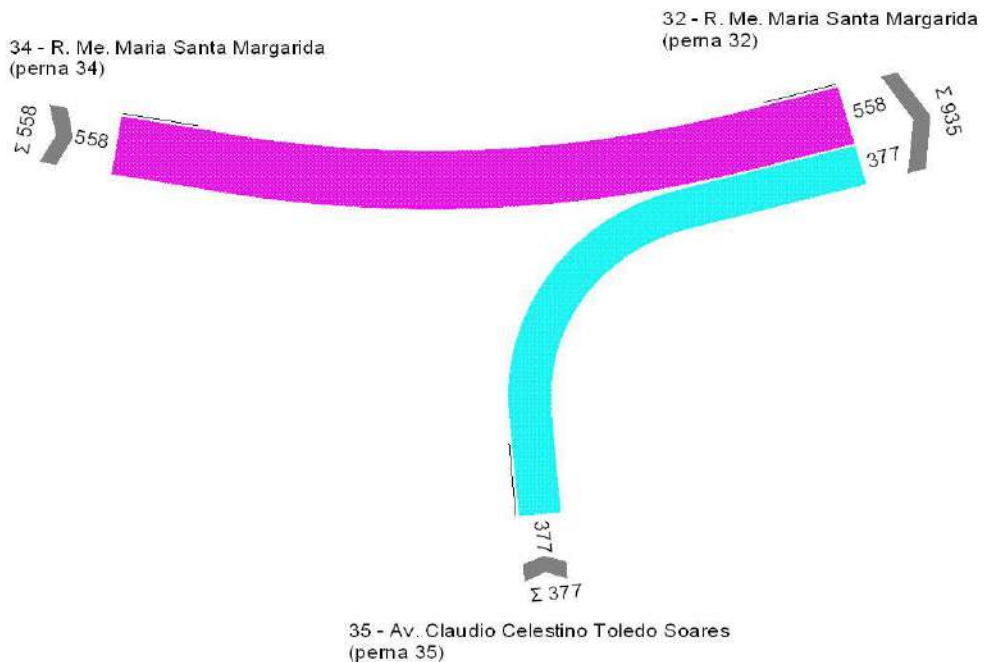
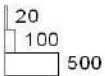


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/20

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 23.10.2019 09:00 - 23.10.2019 10:00
 1341 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 408 | 42 | | |
| 24 | 357 | 130 | 404 | |

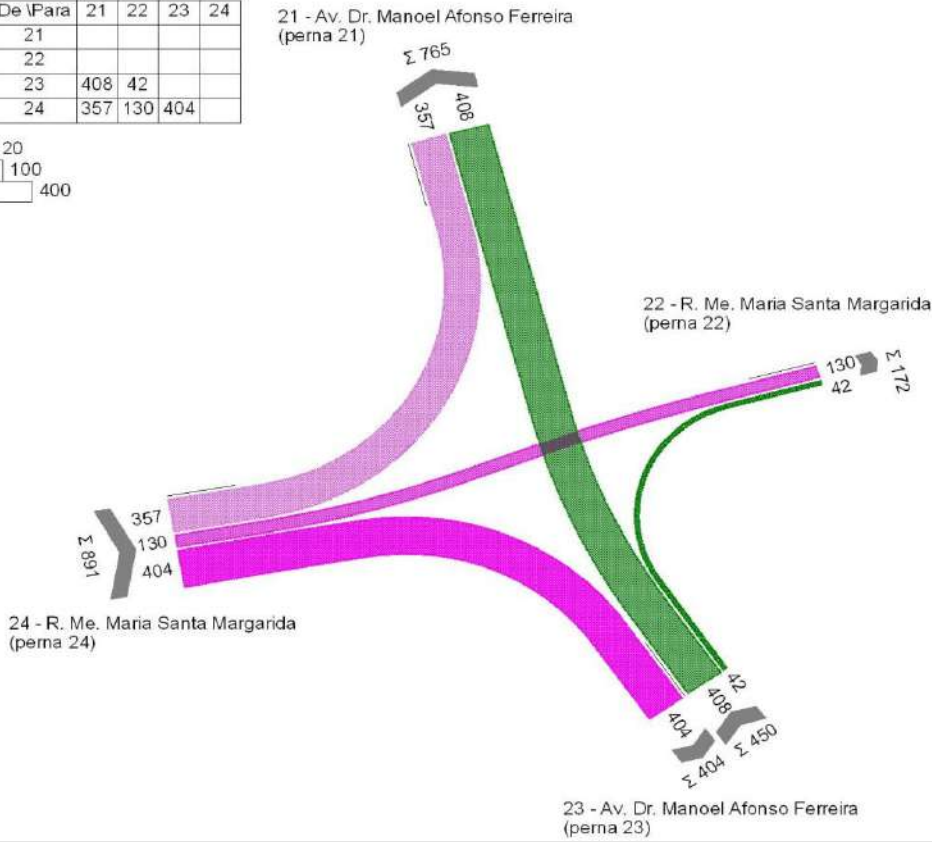


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/20

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 23.10.2019 09:00 - 23.10.2019 10:00
 892 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 571 | | |
| 35 | 321 | | |

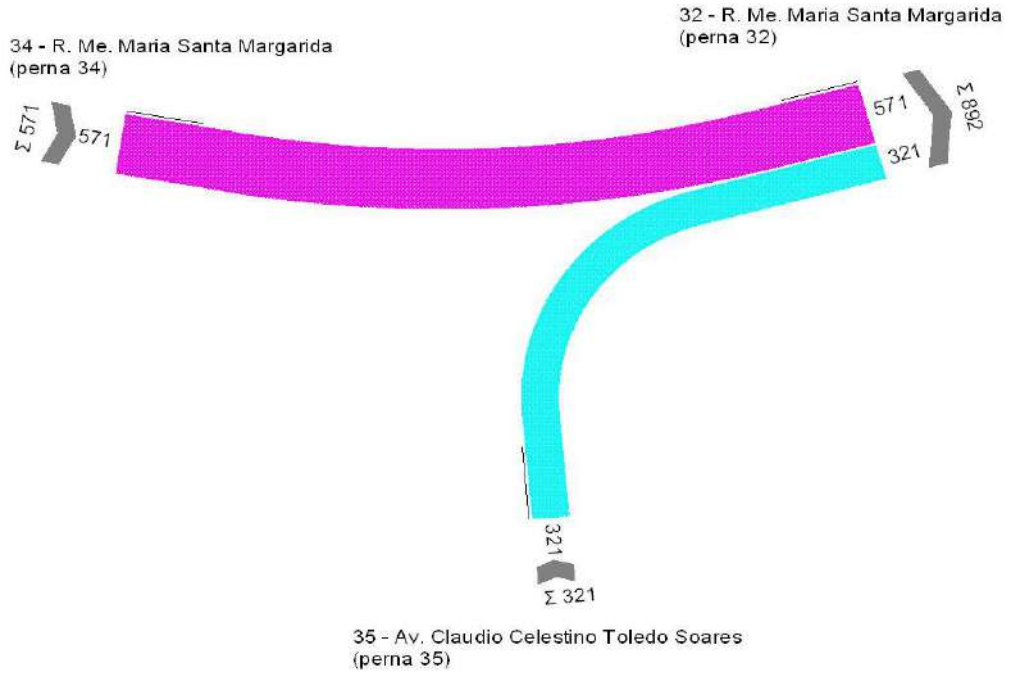
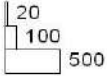
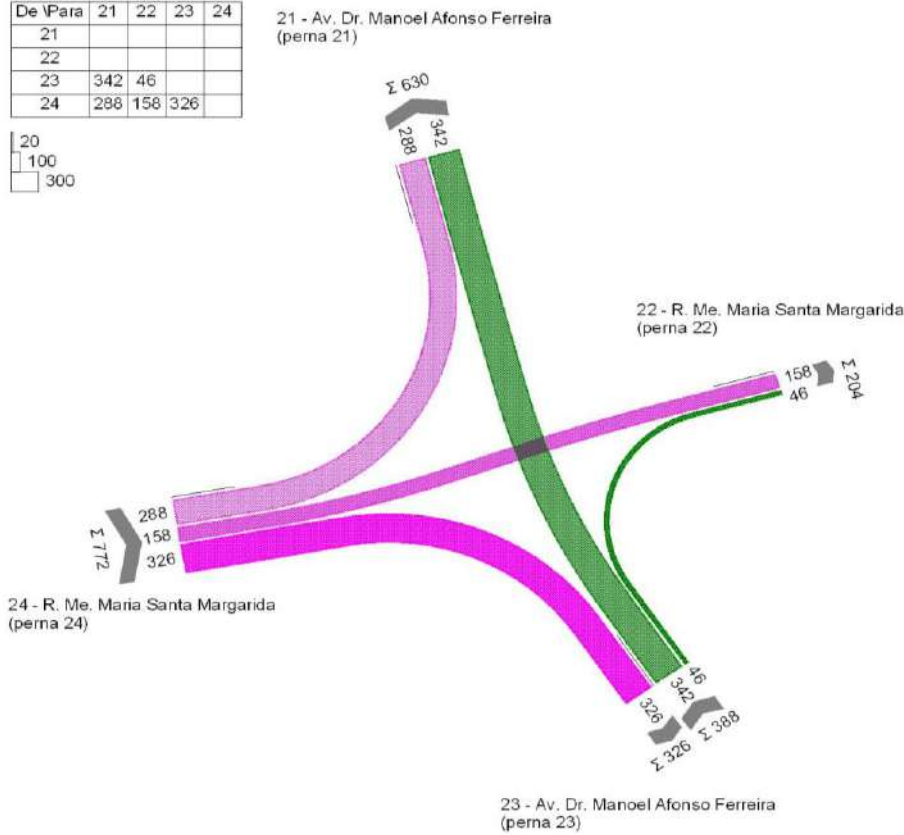


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 23.10.2019 11:00 - 23.10.2019 12:00
 1160 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 342 | 46 | | |
| 24 | 288 | 158 | 326 | |

20
 100
 300



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 23.10.2019 12:00 - 23.10.2019 13:00
 1315 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 414 | 64 | | |
| 24 | 347 | 255 | 235 | |

20
 100
 400

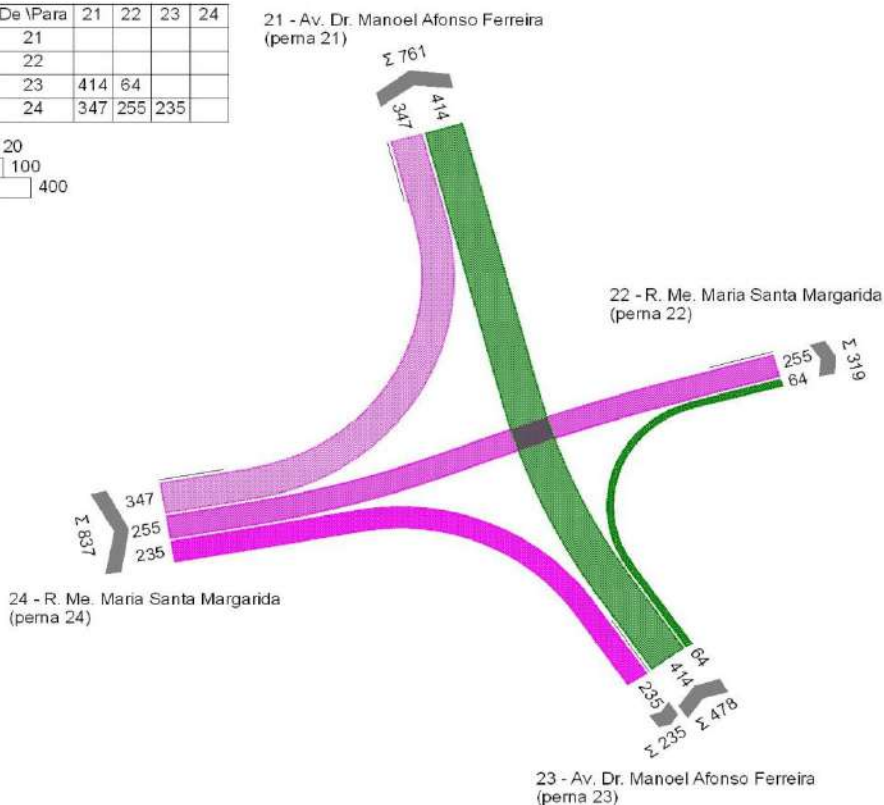
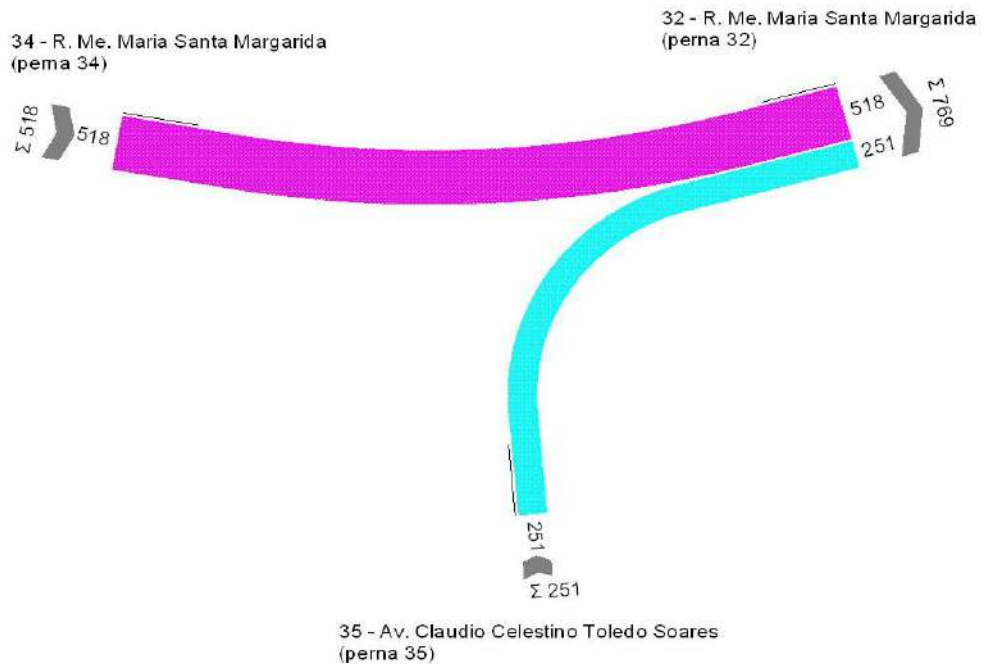
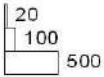


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 23.10.2019 11:00 - 23.10.2019 12:00
 769 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 518 | | |
| 35 | 251 | | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 23.10.2019 12:00 - 23.10.2019 13:00
 836 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 526 | | |
| 35 | 310 | | |

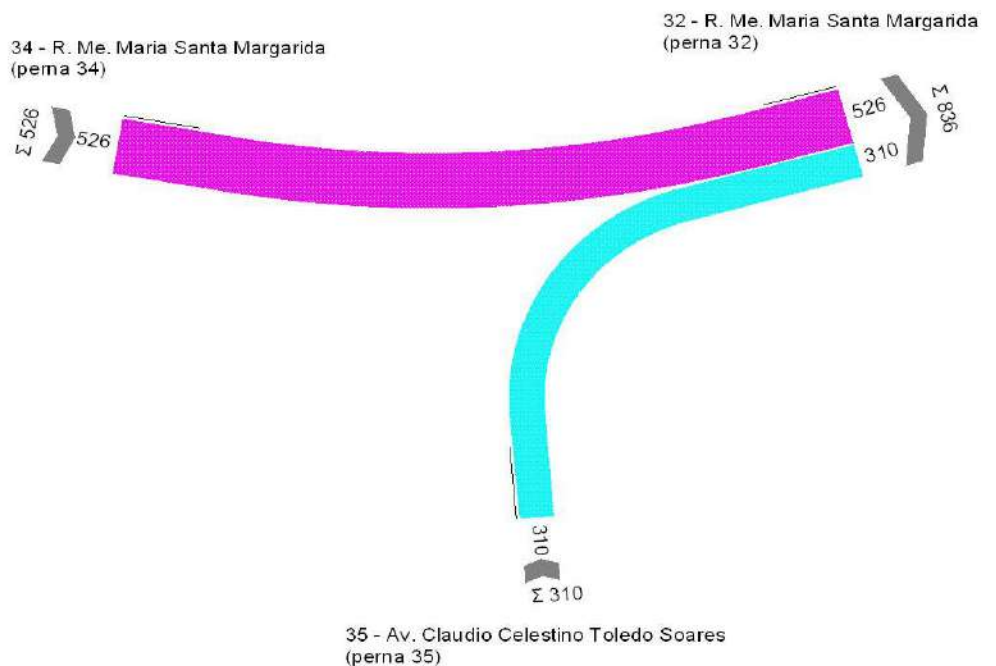
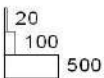


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 23.10.2019 13:00 - 23.10.2019 14:00
 1250 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 418 | 48 | | |
| 24 | 370 | 192 | 222 | |

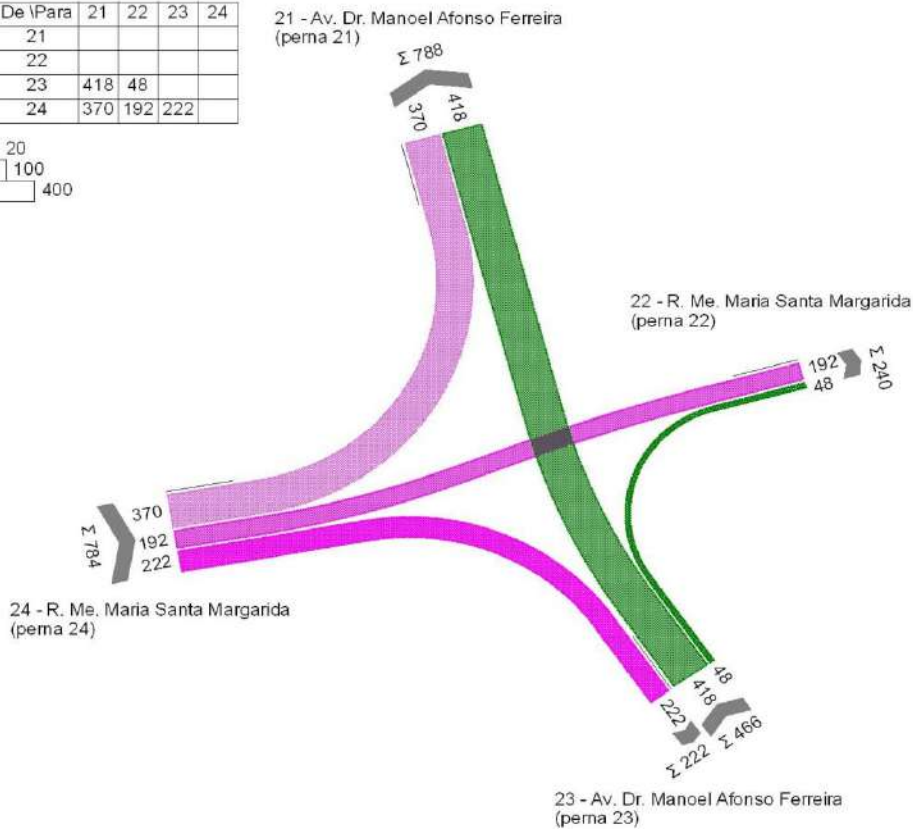


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 23.10.2019 13:00 - 23.10.2019 14:00
 780 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 500 | | |
| 35 | 280 | | |

| |
|-----|
| 20 |
| 100 |
| 500 |

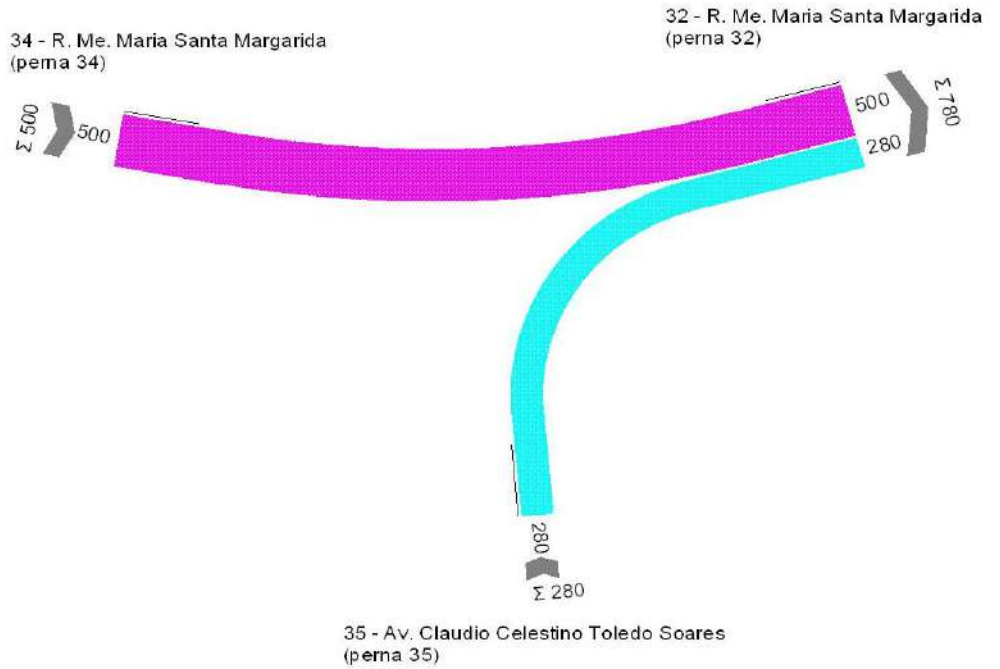
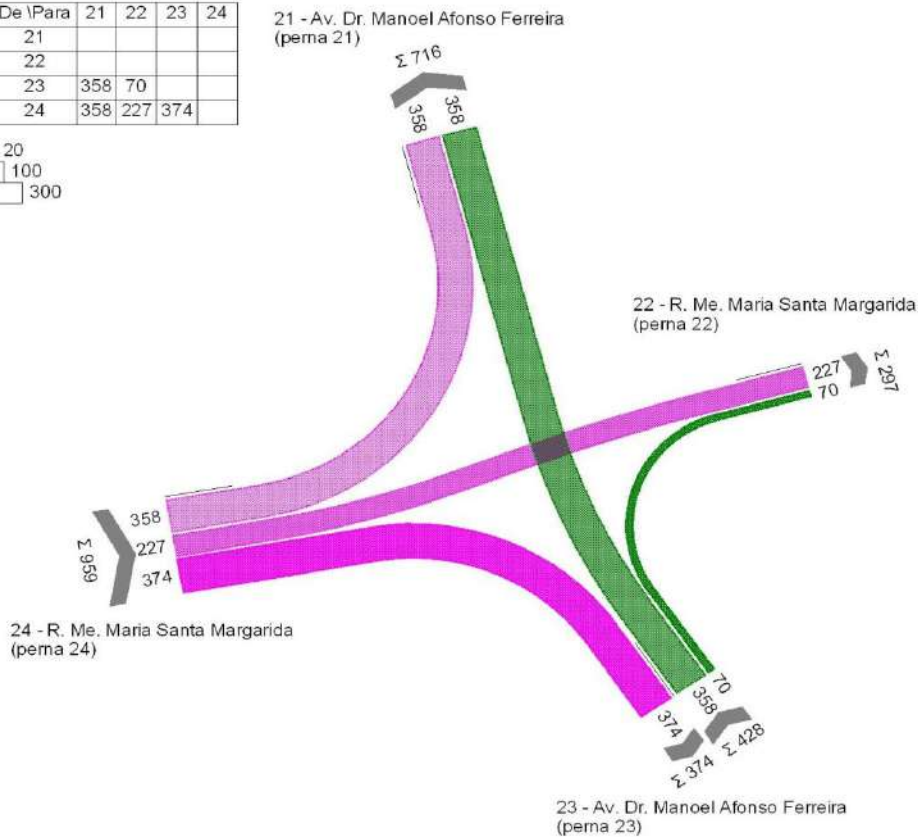


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 23.10.2019 17:00 - 23.10.2019 18:00
 1387 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 358 | 70 | | |
| 24 | 358 | 227 | 374 | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 23.10.2019 18:00 - 23.10.2019 19:00
 1397 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 334 | 54 | | |
| 24 | 348 | 178 | 483 | |

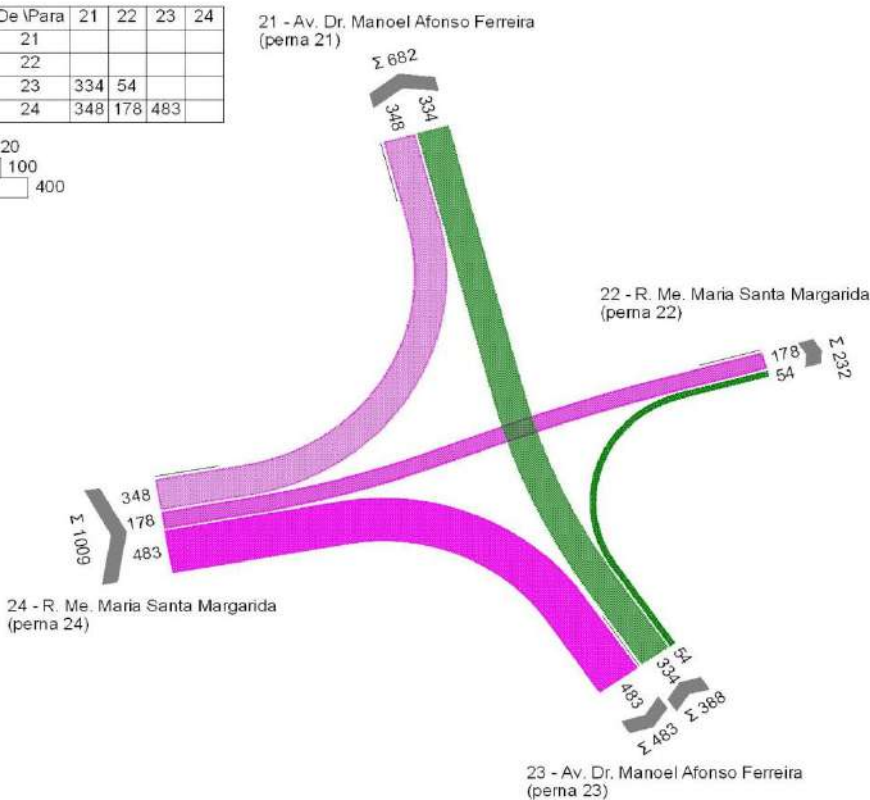
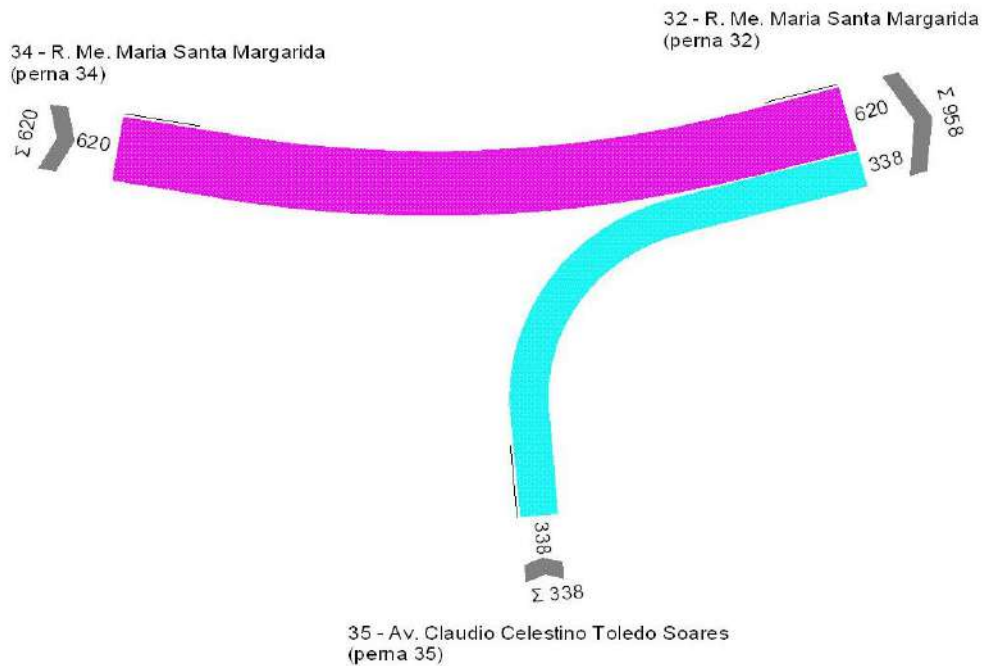
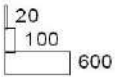


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 23.10.2019 17:00 - 23.10.2019 18:00
 958 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 620 | | |
| 35 | 338 | | |



Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 23.10.2019 18:00 - 23.10.2019 19:00
 1009 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 674 | | |
| 35 | 335 | | |

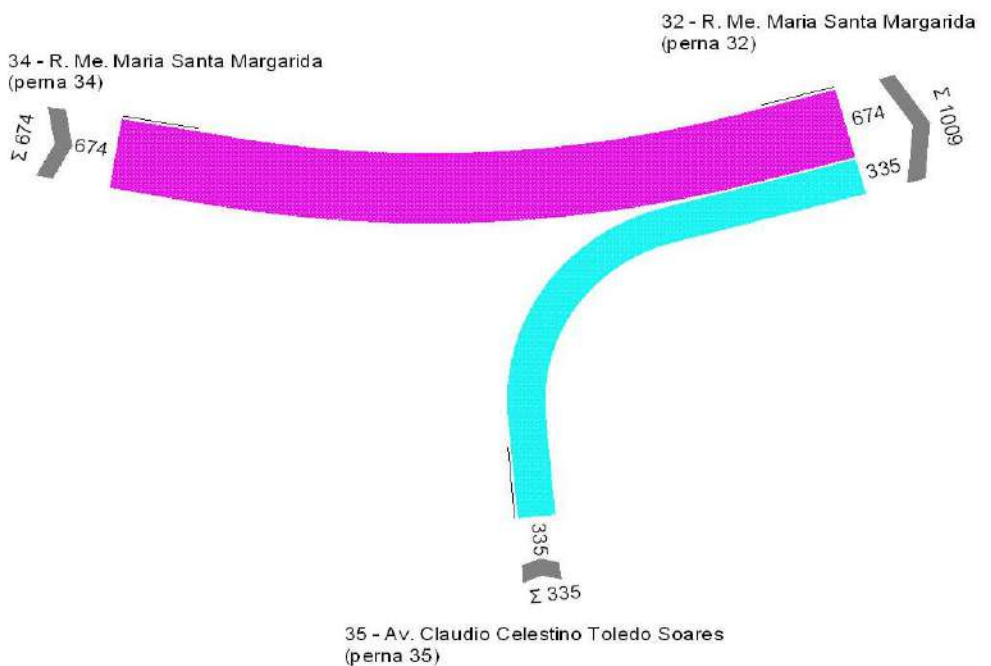
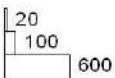


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 23.10.2019 19:00 - 23.10.2019 20:00
 1143 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 302 | 78 | | |
| 24 | 284 | 143 | 336 | |

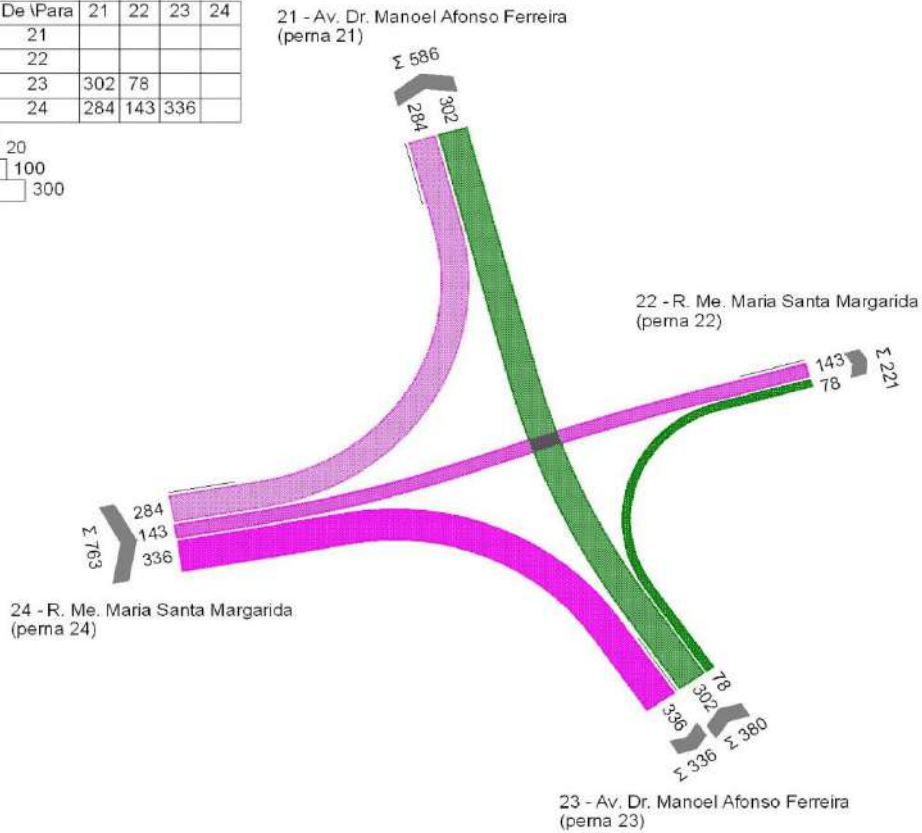
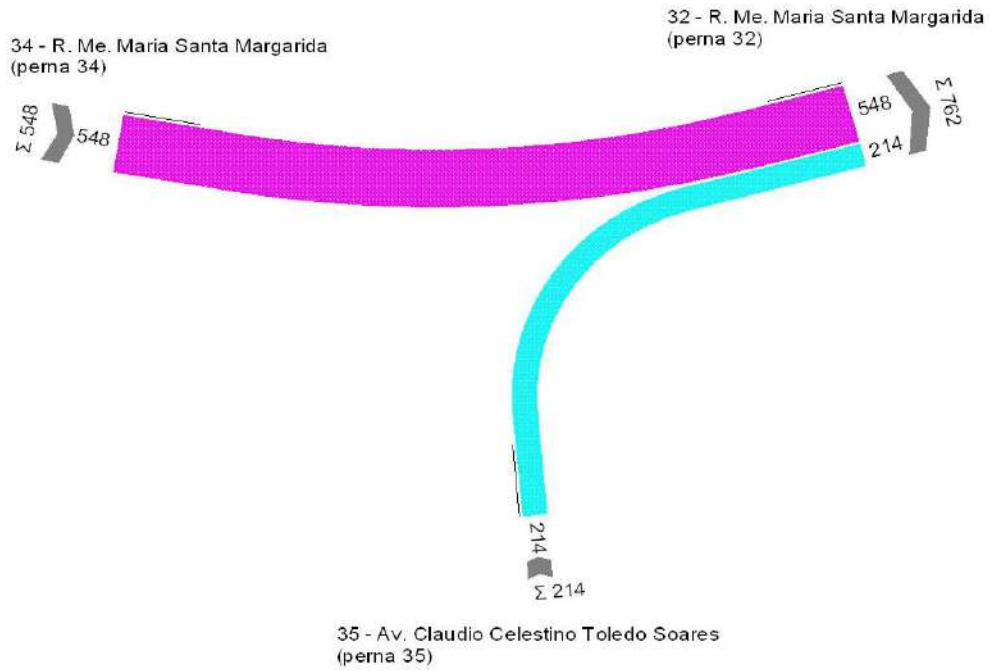
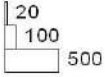


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Contagem De 23-10-2019 as 00h00 até 24-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 23.10.2019 19:00 - 23.10.2019 20:00
 762 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 548 | | |
| 35 | 214 | | |



PCU

003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 23/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

23 > 21 Av. Dr. Manoel Afonso Ferreira em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 734 | 0 | 9 | 1 | 0 | 759 | 744 |
| 8:00 | 9:00 | 594 | 0 | 17 | 3 | 0 | 643 | 614 |
| 9:00 | 10:00 | 373 | 0 | 14 | 0 | 0 | 408 | 387 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 300 | 0 | 12 | 6 | 0 | 342 | 318 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 382 | 0 | 12 | 1 | 0 | 414 | 395 |
| 13:00 | 14:00 | 356 | 0 | 16 | 11 | 0 | 418 | 383 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 335 | 0 | 7 | 3 | 0 | 359 | 345 |
| 18:00 | 19:00 | 317 | 0 | 5 | 2 | 0 | 334 | 324 |
| 19:00 | 20:00 | 269 | 0 | 9 | 5 | 0 | 302 | 283 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
23 > 21 Av. Dr. Manoel Afonso Ferreira em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 86 | 0 | 2 | 0 | 0 | 91 | 88 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 92 | 0 | 3 | 1 | 0 | 102 | 96 | 395 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 103 | 0 | 4 | 0 | 0 | 113 | 107 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 101 | 0 | 3 | 0 | 0 | 109 | 104 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 100 | 0 | 4 | 2 | 0 | 114 | 106 | 383 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 72 | 0 | 4 | 3 | 0 | 88 | 79 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 89 | 0 | 2 | 3 | 0 | 100 | 94 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 95 | 0 | 6 | 3 | 0 | 116 | 104 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 109 | 0 | 2 | 0 | 0 | 114 | 111 | 345 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 69 | 0 | 1 | 0 | 0 | 72 | 70 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 96 | 0 | 1 | 2 | 0 | 103 | 99 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 61 | 0 | 3 | 1 | 0 | 71 | 65 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 89 | 0 | 1 | 0 | 0 | 92 | 90 | 324 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 72 | 0 | 1 | 0 | 0 | 75 | 73 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 77 | 0 | 1 | 0 | 0 | 80 | 78 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 79 | 0 | 2 | 2 | 0 | 88 | 83 | |
| 7:00 | 7:15 | 163 | 0 | 3 | 0 | 0 | 171 | 166 | 759 | 19:00 | 19:15 | 90 | 0 | 1 | 2 | 0 | 97 | 93 | 283 |
| 7:15 | 7:30 | 174 | 0 | 4 | 0 | 0 | 184 | 178 | | 19:15 | 19:30 | 65 | 0 | 1 | 0 | 0 | 68 | 66 | |
| 7:30 | 7:45 | 178 | 0 | 1 | 0 | 0 | 181 | 179 | | 19:30 | 19:45 | 70 | 0 | 3 | 1 | 0 | 80 | 74 | |
| 7:45 | 8:00 | 219 | 0 | 1 | 1 | 0 | 224 | 221 | | 19:45 | 20:00 | 44 | 0 | 4 | 2 | 0 | 58 | 50 | |
| 8:00 | 8:15 | 179 | 0 | 4 | 0 | 0 | 189 | 183 | 643 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 160 | 0 | 3 | 1 | 0 | 170 | 164 | | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 130 | 0 | 5 | 1 | 0 | 145 | 136 | | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 125 | 0 | 5 | 1 | 0 | 140 | 131 | | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 103 | 0 | 0 | 0 | 0 | 103 | 103 | 408 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 83 | 0 | 3 | 0 | 0 | 91 | 86 | | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 89 | 0 | 5 | 0 | 0 | 102 | 94 | | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 98 | 0 | 6 | 0 | 0 | 113 | 104 | | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 71 | 0 | 2 | 0 | 0 | 76 | 73 | 342 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 58 | 0 | 3 | 2 | 0 | 70 | 63 | | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 79 | 0 | 4 | 3 | 0 | 95 | 86 | | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 92 | 0 | 3 | 1 | 0 | 102 | 96 | | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

23 > 22 Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 61 | 0 | 0 | 0 | 0 | 61 | 61 |
| 8:00 | 9:00 | 52 | 0 | 0 | 0 | 0 | 52 | 52 |
| 9:00 | 10:00 | 39 | 0 | 1 | 0 | 0 | 42 | 40 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 46 | 0 | 0 | 0 | 0 | 46 | 46 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 59 | 0 | 2 | 0 | 0 | 64 | 61 |
| 13:00 | 14:00 | 43 | 0 | 2 | 0 | 0 | 48 | 45 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 67 | 0 | 1 | 0 | 0 | 70 | 68 |
| 18:00 | 19:00 | 52 | 0 | 1 | 0 | 0 | 55 | 53 |
| 19:00 | 20:00 | 65 | 0 | 3 | 3 | 0 | 79 | 71 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
23 > 22
Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 11 | 0 | 0 | 0 | 0 | 11 | 11 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 15 | 0 | 1 | 0 | 0 | 18 | 16 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 12 | 0 | 0 | 0 | 0 | 12 | 12 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 21 | 0 | 1 | 0 | 0 | 24 | 22 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 14 | 0 | 0 | 0 | 0 | 14 | 14 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 8 | 0 | 0 | 0 | 0 | 8 | 8 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 10 | 0 | 1 | 0 | 0 | 13 | 11 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 11 | 0 | 1 | 0 | 0 | 14 | 12 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 14 | 0 | 0 | 0 | 0 | 14 | 14 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 19 | 0 | 0 | 0 | 0 | 19 | 19 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 17 | 0 | 1 | 0 | 0 | 20 | 18 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 17 | 0 | 0 | 0 | 0 | 17 | 17 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 14 | 0 | 1 | 0 | 0 | 17 | 15 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 11 | 0 | 0 | 0 | 0 | 11 | 11 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 10 | 0 | 0 | 0 | 0 | 10 | 10 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 17 | 0 | 0 | 0 | 0 | 17 | 17 |
| 7:00 | 7:15 | 19 | 0 | 0 | 0 | 0 | 19 | 19 | 19:00 | 19:15 | 15 | 0 | 0 | 2 | 0 | 19 | 17 |
| 7:15 | 7:30 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 19:15 | 19:30 | 23 | 0 | 2 | 0 | 0 | 28 | 25 |
| 7:30 | 7:45 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 19:30 | 19:45 | 16 | 0 | 0 | 1 | 0 | 18 | 17 |
| 7:45 | 8:00 | 16 | 0 | 0 | 0 | 0 | 16 | 16 | 19:45 | 20:00 | 11 | 0 | 1 | 0 | 0 | 14 | 12 |
| 8:00 | 8:15 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 10 | 0 | 0 | 0 | 0 | 10 | 10 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 7 | 0 | 1 | 0 | 0 | 10 | 8 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 10 | 0 | 0 | 0 | 0 | 10 | 10 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

24 > 21 R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 293 | 0 | 1 | 2 | 0 | 300 | 296 |
| 8:00 | 9:00 | 437 | 0 | 3 | 2 | 0 | 449 | 442 |
| 9:00 | 10:00 | 347 | 0 | 4 | 0 | 0 | 357 | 351 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 280 | 0 | 3 | 0 | 0 | 288 | 283 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 335 | 0 | 4 | 1 | 0 | 347 | 340 |
| 13:00 | 14:00 | 355 | 0 | 5 | 1 | 0 | 370 | 361 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 351 | 0 | 3 | 0 | 0 | 359 | 354 |
| 18:00 | 19:00 | 339 | 0 | 2 | 2 | 0 | 348 | 343 |
| 19:00 | 20:00 | 277 | 0 | 1 | 2 | 0 | 284 | 280 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

24 > 21

R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 82 | 0 | 0 | 0 | 0 | 82 | | 82 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 80 | 0 | 0 | 1 | 0 | 82 | | 81 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 81 | 0 | 3 | 0 | 0 | 89 | 347 | 84 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 92 | 0 | 1 | 0 | 0 | 95 | | 93 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 95 | 0 | 1 | 0 | 0 | 98 | | 96 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 90 | 0 | 0 | 1 | 0 | 92 | 370 | 91 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 87 | 0 | 3 | 0 | 0 | 95 | | 90 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 83 | 0 | 1 | 0 | 0 | 86 | | 84 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 82 | 0 | 2 | 0 | 0 | 87 | | 84 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 87 | 0 | 0 | 0 | 0 | 87 | 359 | 87 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 90 | 0 | 1 | 0 | 0 | 93 | | 91 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 92 | 0 | 0 | 0 | 0 | 92 | | 92 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 91 | 0 | 0 | 1 | 0 | 93 | | 92 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 87 | 0 | 0 | 0 | 0 | 87 | 348 | 87 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 83 | 0 | 1 | 1 | 0 | 88 | | 85 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 78 | 0 | 1 | 0 | 0 | 81 | | 79 |
| 7:00 | 7:15 | 64 | 0 | 0 | 0 | 0 | 64 | | 64 | 19:00 | 19:15 | 64 | 0 | 1 | 0 | 0 | 67 | | 65 |
| 7:15 | 7:30 | 69 | 0 | 0 | 0 | 0 | 69 | 300 | 69 | 19:15 | 19:30 | 69 | 0 | 0 | 0 | 0 | 69 | 284 | 69 |
| 7:30 | 7:45 | 72 | 0 | 1 | 1 | 0 | 77 | | 74 | 19:30 | 19:45 | 74 | 0 | 0 | 2 | 0 | 78 | | 76 |
| 7:45 | 8:00 | 88 | 0 | 0 | 1 | 0 | 90 | | 89 | 19:45 | 20:00 | 70 | 0 | 0 | 0 | 0 | 70 | | 70 |
| 8:00 | 8:15 | 92 | 0 | 1 | 1 | 0 | 97 | | 94 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:15 | 8:30 | 102 | 0 | 1 | 0 | 0 | 105 | 449 | 103 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 125 | 0 | 0 | 0 | 0 | 125 | | 125 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 118 | 0 | 1 | 1 | 0 | 123 | | 120 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 108 | 0 | 2 | 0 | 0 | 113 | | 110 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:15 | 9:30 | 89 | 0 | 0 | 0 | 0 | 89 | 357 | 89 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 77 | 0 | 1 | 0 | 0 | 80 | | 78 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 73 | 0 | 1 | 0 | 0 | 76 | | 74 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 61 | 0 | 1 | 0 | 0 | 64 | | 62 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:15 | 11:30 | 68 | 0 | 0 | 0 | 0 | 68 | 288 | 68 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 72 | 0 | 1 | 0 | 0 | 75 | | 73 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 79 | 0 | 1 | 0 | 0 | 82 | | 80 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

24 > 22 R. M. Maria Santa Margarida em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 269 | 0 | 5 | 3 | 0 | 288 | 277 |
| 8:00 | 9:00 | 178 | 0 | 5 | 0 | 0 | 191 | 183 |
| 9:00 | 10:00 | 113 | 0 | 7 | 0 | 0 | 131 | 120 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 153 | 0 | 2 | 0 | 0 | 158 | 155 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 245 | 0 | 4 | 0 | 0 | 255 | 249 |
| 13:00 | 14:00 | 185 | 0 | 3 | 0 | 0 | 193 | 188 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 227 | 0 | 0 | 0 | 0 | 227 | 227 |
| 18:00 | 19:00 | 178 | 0 | 0 | 0 | 0 | 178 | 178 |
| 19:00 | 20:00 | 136 | 0 | 2 | 1 | 0 | 143 | 139 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
24 > 22
R. M. Maria Santa Margarida em frente
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-------|----------------|-------|-----|---|-------|-----|----|-----|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 63 | 0 | 0 | 0 | 0 | 63 | | 63 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 70 | 0 | 2 | 0 | 0 | 75 | 255 | 72 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 58 | 0 | 0 | 0 | 0 | 58 | | 58 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 54 | 0 | 2 | 0 | 0 | 59 | | 56 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 49 | 0 | 1 | 0 | 0 | 52 | 193 | 50 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 47 | 0 | 1 | 0 | 0 | 50 | | 48 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 42 | 0 | 0 | 0 | 0 | 42 | | 42 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 47 | 0 | 1 | 0 | 0 | 50 | | 48 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 58 | 0 | 0 | 0 | 0 | 58 | | 227 | 58 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 56 | 0 | 0 | 0 | 0 | 56 | 56 | | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 60 | 0 | 0 | 0 | 0 | 60 | 60 | | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 53 | 0 | 0 | 0 | 0 | 53 | 53 | | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 46 | 0 | 0 | 0 | 0 | 46 | 178 | | 46 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 49 | 0 | 0 | 0 | 0 | 49 | | 49 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 41 | 0 | 0 | 0 | 0 | 41 | | 41 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 42 | 0 | 0 | 0 | 0 | 42 | | 42 | |
| 7:00 | 7:15 | 106 | 0 | 1 | 1 | 0 | 111 | | 108 | 19:00 | 19:15 | 37 | 0 | 0 | 1 | 0 | 39 | | 143 | 38 |
| 7:15 | 7:30 | 58 | 0 | 2 | 1 | 0 | 65 | 288 | 61 | 19:15 | 19:30 | 33 | 0 | 1 | 0 | 0 | 36 | 34 | | |
| 7:30 | 7:45 | 52 | 0 | 1 | 0 | 0 | 55 | | 53 | 19:30 | 19:45 | 37 | 0 | 0 | 0 | 0 | 37 | 37 | | |
| 7:45 | 8:00 | 53 | 0 | 1 | 1 | 0 | 58 | 55 | 19:45 | 20:00 | 29 | 0 | 1 | 0 | 0 | 32 | 30 | | | |
| 8:00 | 8:15 | 48 | 0 | 3 | 0 | 0 | 56 | | 51 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:15 | 8:30 | 39 | 0 | 1 | 0 | 0 | 42 | 191 | 40 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:30 | 8:45 | 39 | 0 | 1 | 0 | 0 | 42 | | 40 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 8:45 | 9:00 | 52 | 0 | 0 | 0 | 0 | 52 | 52 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 9:00 | 9:15 | 32 | 0 | 1 | 0 | 0 | 35 | | 33 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 9:15 | 9:30 | 30 | 0 | 1 | 0 | 0 | 33 | 131 | 31 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 27 | 0 | 2 | 0 | 0 | 32 | | 29 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 24 | 0 | 3 | 0 | 0 | 32 | 27 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:00 | 11:15 | 30 | 0 | 1 | 0 | 0 | 33 | | 31 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| 11:15 | 11:30 | 34 | 0 | 1 | 0 | 0 | 37 | 158 | 35 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 38 | 0 | 0 | 0 | 0 | 38 | | 38 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 51 | 0 | 0 | 0 | 0 | 51 | 51 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

Movimento Contado

24 > 23 R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 295 | 0 | 5 | 5 | 0 | 318 | 305 |
| 8:00 | 9:00 | 270 | 0 | 13 | 2 | 0 | 307 | 285 |
| 9:00 | 10:00 | 362 | 0 | 13 | 5 | 0 | 405 | 380 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 272 | 0 | 19 | 3 | 0 | 326 | 294 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 199 | 0 | 12 | 3 | 0 | 235 | 214 |
| 13:00 | 14:00 | 212 | 0 | 4 | 0 | 0 | 222 | 216 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 348 | 0 | 4 | 8 | 0 | 374 | 360 |
| 18:00 | 19:00 | 454 | 0 | 6 | 7 | 0 | 483 | 467 |
| 19:00 | 20:00 | 309 | 0 | 2 | 11 | 0 | 336 | 322 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
24 > 23
R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 54 | 0 | 4 | 1 | 0 | 66 | 59 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 53 | 0 | 2 | 0 | 0 | 58 | 55 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 53 | 0 | 5 | 1 | 0 | 68 | 59 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 39 | 0 | 1 | 1 | 0 | 44 | 41 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 57 | 0 | 1 | 0 | 0 | 60 | 58 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 45 | 0 | 0 | 0 | 0 | 45 | 45 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 49 | 0 | 0 | 0 | 0 | 49 | 49 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 61 | 0 | 3 | 0 | 0 | 69 | 64 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 95 | 0 | 0 | 2 | 0 | 99 | 97 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 72 | 0 | 0 | 0 | 0 | 72 | 72 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 92 | 0 | 2 | 2 | 0 | 101 | 96 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 89 | 0 | 2 | 4 | 0 | 102 | 95 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 119 | 0 | 0 | 1 | 0 | 121 | 120 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 120 | 0 | 3 | 1 | 0 | 130 | 124 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 125 | 0 | 0 | 1 | 0 | 127 | 126 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 90 | 0 | 3 | 4 | 0 | 106 | 97 |
| 7:00 | 7:15 | 51 | 0 | 0 | 0 | 0 | 51 | 51 | 19:00 | 19:15 | 95 | 0 | 0 | 5 | 0 | 105 | 100 |
| 7:15 | 7:30 | 94 | 0 | 0 | 2 | 0 | 98 | 96 | 19:15 | 19:30 | 71 | 0 | 0 | 4 | 0 | 79 | 75 |
| 7:30 | 7:45 | 87 | 0 | 3 | 2 | 0 | 99 | 92 | 19:30 | 19:45 | 77 | 0 | 1 | 0 | 0 | 80 | 78 |
| 7:45 | 8:00 | 63 | 0 | 2 | 1 | 0 | 70 | 66 | 19:45 | 20:00 | 66 | 0 | 1 | 2 | 0 | 73 | 69 |
| 8:00 | 8:15 | 81 | 0 | 1 | 0 | 0 | 84 | 82 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 68 | 0 | 2 | 2 | 0 | 77 | 72 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 53 | 0 | 5 | 0 | 0 | 66 | 58 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 68 | 0 | 5 | 0 | 0 | 81 | 73 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 115 | 0 | 3 | 1 | 0 | 125 | 119 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 72 | 0 | 4 | 2 | 0 | 86 | 78 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 95 | 0 | 3 | 2 | 0 | 107 | 100 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 80 | 0 | 3 | 0 | 0 | 88 | 83 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 97 | 0 | 6 | 1 | 0 | 114 | 104 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 62 | 0 | 4 | 1 | 0 | 74 | 67 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 58 | 0 | 3 | 1 | 0 | 68 | 62 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 55 | 0 | 6 | 0 | 0 | 70 | 61 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

34 > 32 R. M. Maria Santa Margarida em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 489 | 0 | 1 | 6 | 0 | 504 | 496 |
| 8:00 | 9:00 | 532 | 0 | 9 | 2 | 0 | 559 | 543 |
| 9:00 | 10:00 | 531 | 0 | 12 | 5 | 0 | 571 | 548 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 478 | 0 | 15 | 1 | 0 | 518 | 494 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 498 | 0 | 11 | 0 | 0 | 526 | 509 |
| 13:00 | 14:00 | 482 | 0 | 7 | 0 | 0 | 500 | 489 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 591 | 0 | 5 | 8 | 0 | 620 | 604 |
| 18:00 | 19:00 | 641 | 0 | 6 | 9 | 0 | 674 | 656 |
| 19:00 | 20:00 | 512 | 0 | 4 | 13 | 0 | 548 | 529 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|--|
| Movimento Contado | |
| 34 > 32 | R. M. Maria Santa Margarida em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 129 | 0 | 3 | 0 | 0 | 137 | 132 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 132 | 0 | 2 | 0 | 0 | 137 | 134 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 125 | 0 | 4 | 0 | 0 | 135 | 129 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 112 | 0 | 2 | 0 | 0 | 117 | 114 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 121 | 0 | 2 | 0 | 0 | 126 | 123 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 120 | 0 | 0 | 0 | 0 | 120 | 120 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 123 | 0 | 2 | 0 | 0 | 128 | 125 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 118 | 0 | 3 | 0 | 0 | 126 | 121 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 145 | 0 | 1 | 2 | 0 | 152 | 148 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 137 | 0 | 0 | 0 | 0 | 137 | 137 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 154 | 0 | 2 | 2 | 0 | 163 | 158 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 155 | 0 | 2 | 4 | 0 | 168 | 161 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 158 | 0 | 0 | 2 | 0 | 162 | 160 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 160 | 0 | 2 | 1 | 0 | 167 | 163 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 171 | 0 | 1 | 2 | 0 | 178 | 174 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 152 | 0 | 3 | 4 | 0 | 168 | 159 |
| 7:00 | 7:15 | 131 | 0 | 0 | 1 | 0 | 133 | 132 | 19:00 | 19:15 | 131 | 0 | 1 | 6 | 0 | 146 | 138 |
| 7:15 | 7:30 | 135 | 0 | 0 | 2 | 0 | 139 | 137 | 19:15 | 19:30 | 126 | 0 | 0 | 4 | 0 | 134 | 130 |
| 7:30 | 7:45 | 118 | 0 | 1 | 0 | 0 | 121 | 119 | 19:30 | 19:45 | 133 | 0 | 1 | 1 | 0 | 138 | 135 |
| 7:45 | 8:00 | 105 | 0 | 0 | 3 | 0 | 111 | 108 | 19:45 | 20:00 | 122 | 0 | 2 | 2 | 0 | 131 | 126 |
| 8:00 | 8:15 | 132 | 0 | 1 | 0 | 0 | 135 | 133 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 133 | 0 | 2 | 2 | 0 | 142 | 137 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 126 | 0 | 3 | 0 | 0 | 134 | 129 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 141 | 0 | 3 | 0 | 0 | 149 | 144 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 167 | 0 | 4 | 1 | 0 | 179 | 172 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 126 | 0 | 2 | 2 | 0 | 135 | 130 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 128 | 0 | 2 | 2 | 0 | 137 | 132 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 110 | 0 | 4 | 0 | 0 | 120 | 114 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 137 | 0 | 4 | 1 | 0 | 149 | 142 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 110 | 0 | 3 | 0 | 0 | 118 | 113 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 113 | 0 | 3 | 0 | 0 | 121 | 116 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 118 | 0 | 5 | 0 | 0 | 131 | 123 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

35 > 32 Av. Claudio Celestino Toledo Soares



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | | |
|---------------|-------|-----|-----|---|-------|-----|---|-----|-----|
| Período de | | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | | 368 | 0 | 9 | 4 | 0 | 399 | 381 |
| 8:00 | 9:00 | | 353 | 0 | 8 | 2 | 0 | 377 | 363 |
| 9:00 | 10:00 | | 291 | 0 | 12 | 0 | 0 | 321 | 303 |
| 10:00 | 11:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | | 227 | 0 | 8 | 2 | 0 | 251 | 237 |

| Período Tarde | | | | | | | | | |
|---------------|-------|-----|-----|---|-------|-----|---|-----|-----|
| Período de | | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | | 281 | 0 | 9 | 3 | 0 | 310 | 293 |
| 13:00 | 14:00 | | 270 | 0 | 4 | 0 | 0 | 280 | 274 |
| 14:00 | 15:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | | 335 | 0 | 1 | 0 | 0 | 338 | 336 |
| 18:00 | 19:00 | | 330 | 0 | 2 | 0 | 0 | 335 | 332 |
| 19:00 | 20:00 | | 210 | 0 | 1 | 1 | 0 | 215 | 212 |
| 20:00 | 21:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
35 > 32 Av. Claudio Celestino Toletto Soares

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 70 | 0 | 1 | 1 | 0 | 75 | 72 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 71 | 0 | 2 | 0 | 0 | 76 | 73 | 293 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 67 | 0 | 4 | 1 | 0 | 79 | 72 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 73 | 0 | 2 | 1 | 0 | 80 | 76 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 80 | 0 | 1 | 0 | 0 | 83 | 81 | 274 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 62 | 0 | 0 | 0 | 0 | 62 | 62 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 55 | 0 | 1 | 0 | 0 | 58 | 56 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 73 | 0 | 2 | 0 | 0 | 78 | 75 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 90 | 0 | 0 | 0 | 0 | 90 | 90 | 336 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 78 | 0 | 0 | 0 | 0 | 78 | 78 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 88 | 0 | 1 | 0 | 0 | 91 | 89 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 79 | 0 | 0 | 0 | 0 | 79 | 79 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 98 | 0 | 0 | 0 | 0 | 98 | 98 | 332 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 96 | 0 | 1 | 0 | 0 | 99 | 97 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 78 | 0 | 0 | 0 | 0 | 78 | 78 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 58 | 0 | 1 | 0 | 0 | 61 | 59 | |
| 7:00 | 7:15 | 90 | 0 | 0 | 0 | 0 | 90 | 90 | 90 | 19:00 | 19:15 | 65 | 0 | 0 | 0 | 0 | 65 | 65 | 212 |
| 7:15 | 7:30 | 86 | 0 | 2 | 1 | 0 | 93 | 89 | 399 | 19:15 | 19:30 | 47 | 0 | 1 | 0 | 0 | 50 | 48 | |
| 7:30 | 7:45 | 93 | 0 | 4 | 3 | 0 | 109 | 100 | 399 | 19:30 | 19:45 | 55 | 0 | 0 | 1 | 0 | 57 | 56 | |
| 7:45 | 8:00 | 99 | 0 | 3 | 0 | 0 | 107 | 102 | 399 | 19:45 | 20:00 | 43 | 0 | 0 | 0 | 0 | 43 | 43 | |
| 8:00 | 8:15 | 89 | 0 | 0 | 1 | 0 | 91 | 90 | 377 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 76 | 0 | 2 | 0 | 0 | 81 | 78 | 377 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 91 | 0 | 3 | 0 | 0 | 99 | 94 | 377 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 97 | 0 | 3 | 1 | 0 | 107 | 101 | 377 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 88 | 0 | 2 | 0 | 0 | 93 | 90 | 321 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 65 | 0 | 3 | 0 | 0 | 73 | 68 | 321 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 71 | 0 | 4 | 0 | 0 | 81 | 75 | 321 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 67 | 0 | 3 | 0 | 0 | 75 | 70 | 321 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 51 | 0 | 3 | 0 | 0 | 59 | 54 | 251 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 54 | 0 | 2 | 1 | 0 | 61 | 57 | 251 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 55 | 0 | 1 | 1 | 0 | 60 | 57 | 251 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 67 | 0 | 2 | 0 | 0 | 72 | 69 | 251 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

RELATÓRIO DE PESQUISAS

CONTAGEM VEICULAR CLASSIFICADA

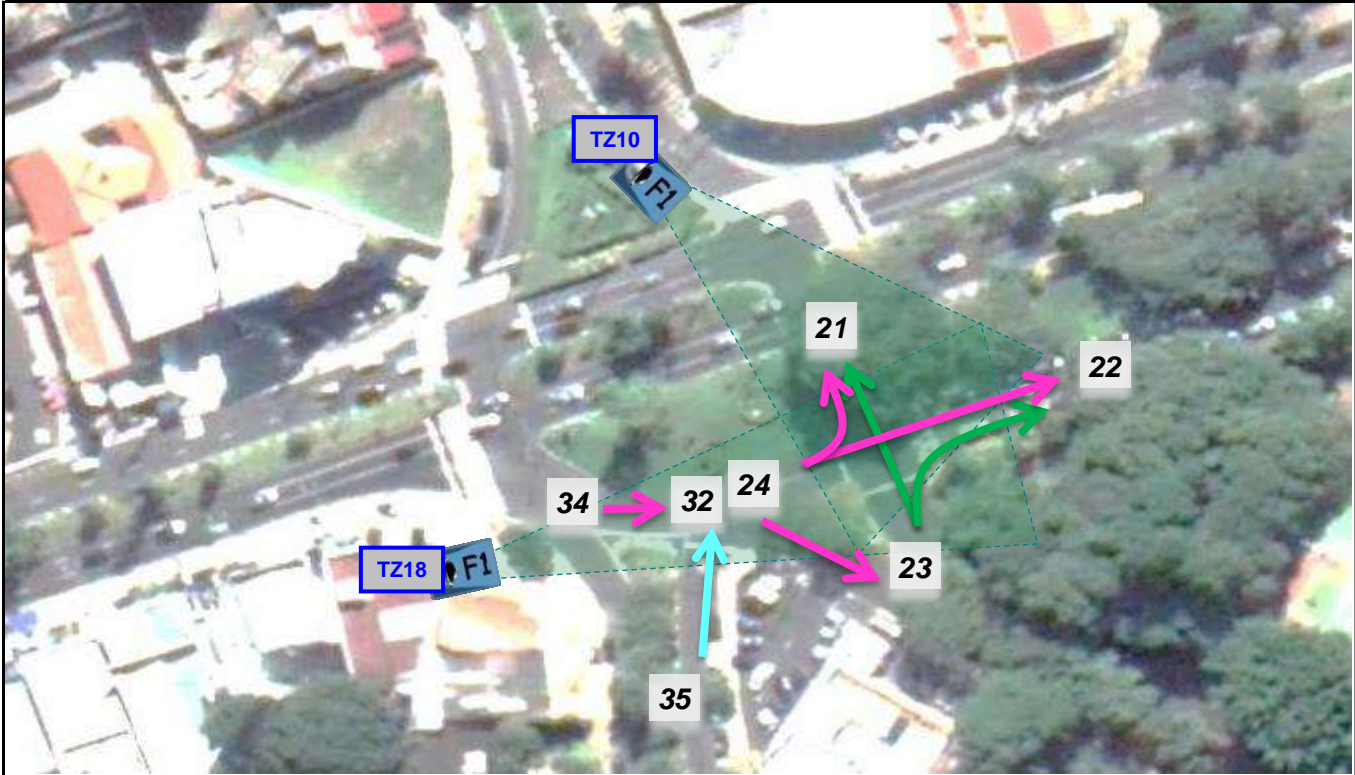
003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira

Ref.: RT-AAP.001-3J21-003_20191024_A

Campinas - SP

Novembro de 2019

Croquis **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019**



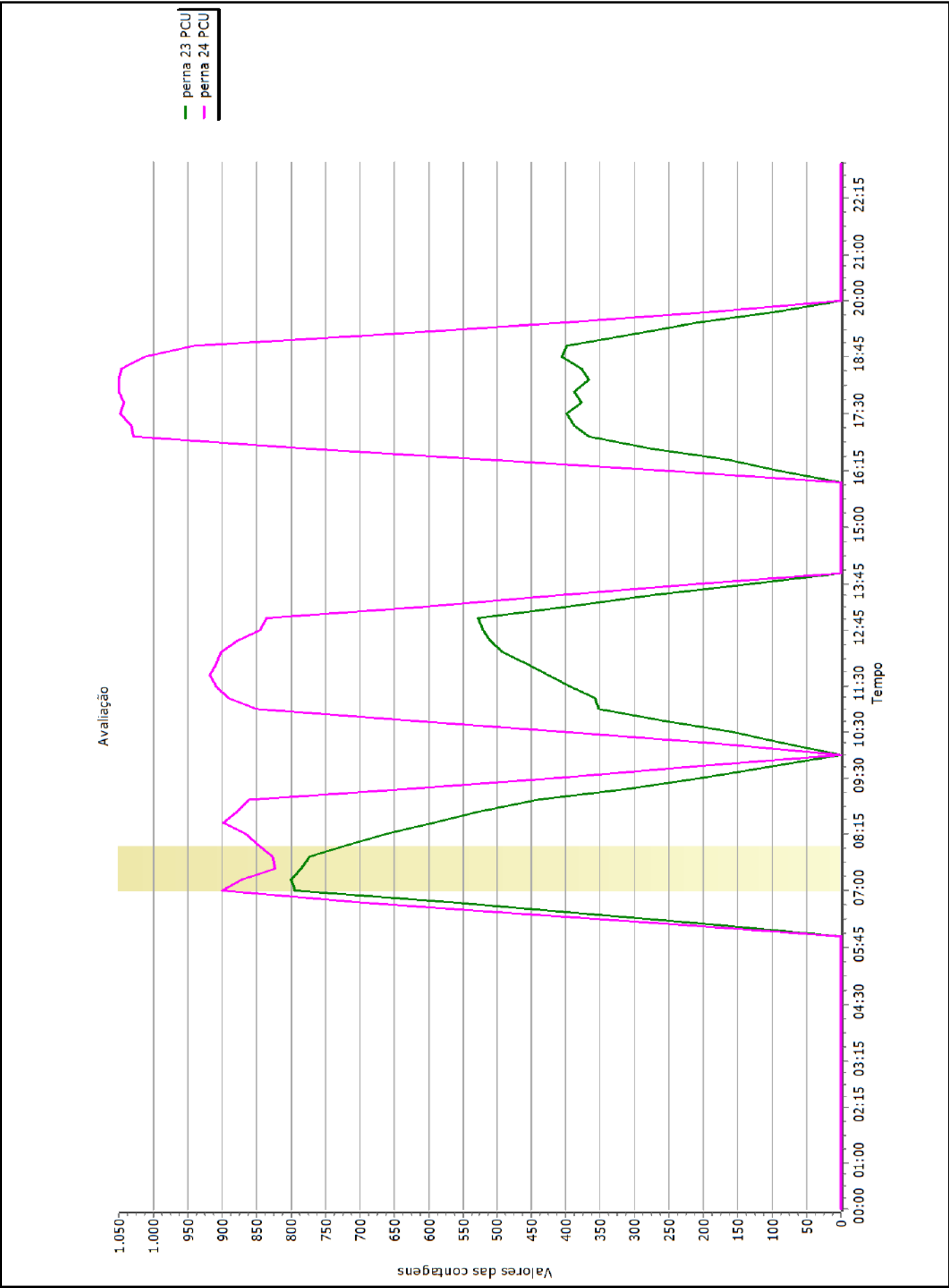
Vídeos



Movimentos Contados

- 23 > 21 Av. Dr. Manoel Afonso Ferreira em frente
- 23 > 22 Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida
- 24 > 21 R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira
- 24 > 22 R. M. Maria Santa Margarida em frente
- 24 > 23 R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira
- 34 > 32 R. M. Maria Santa Margarida em frente
- 35 > 32 Av. Claudio Celestino Toieto Soares

Perfil Horário 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019



Perfil Horário **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira -**
24/10/2019

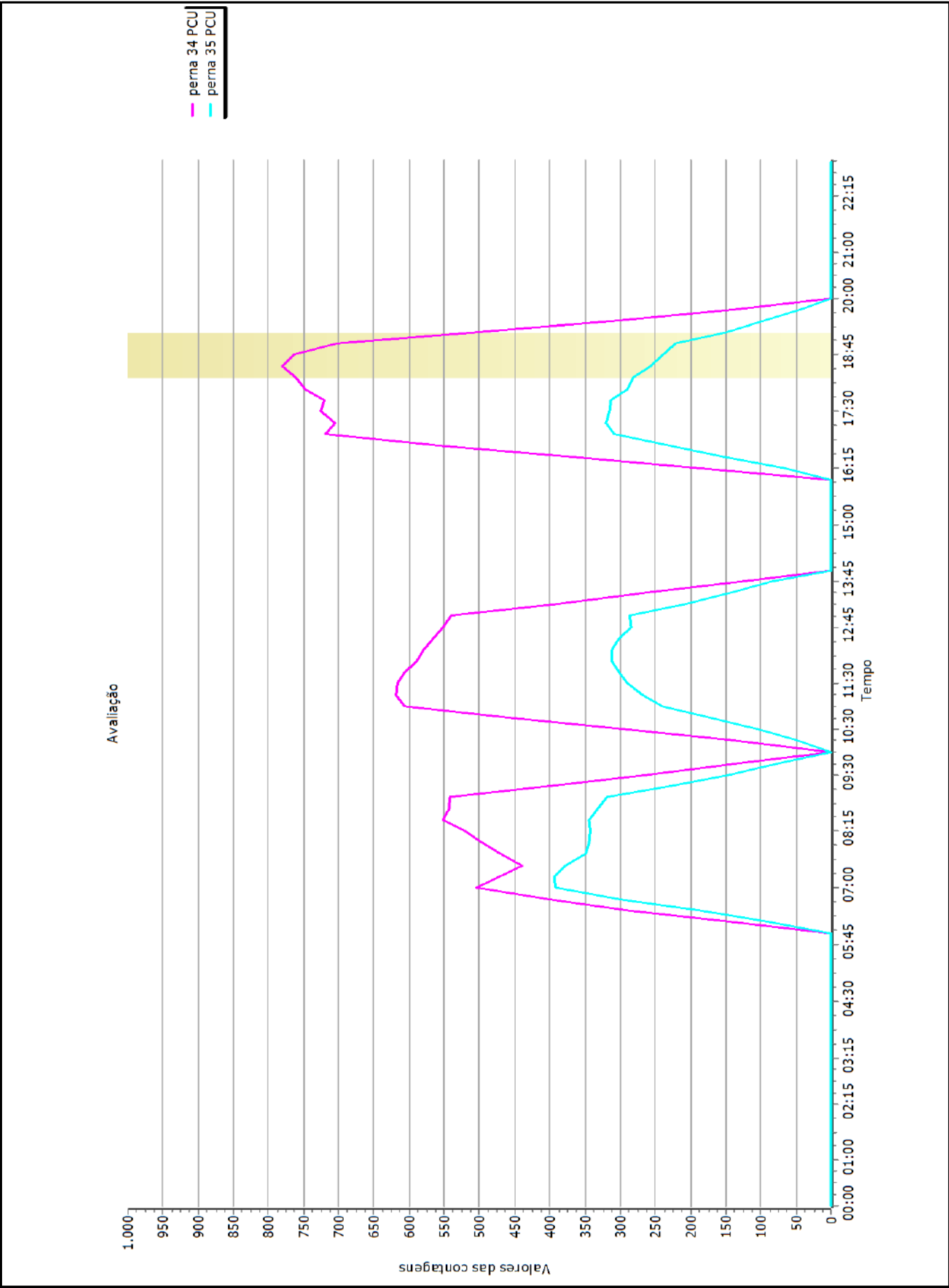
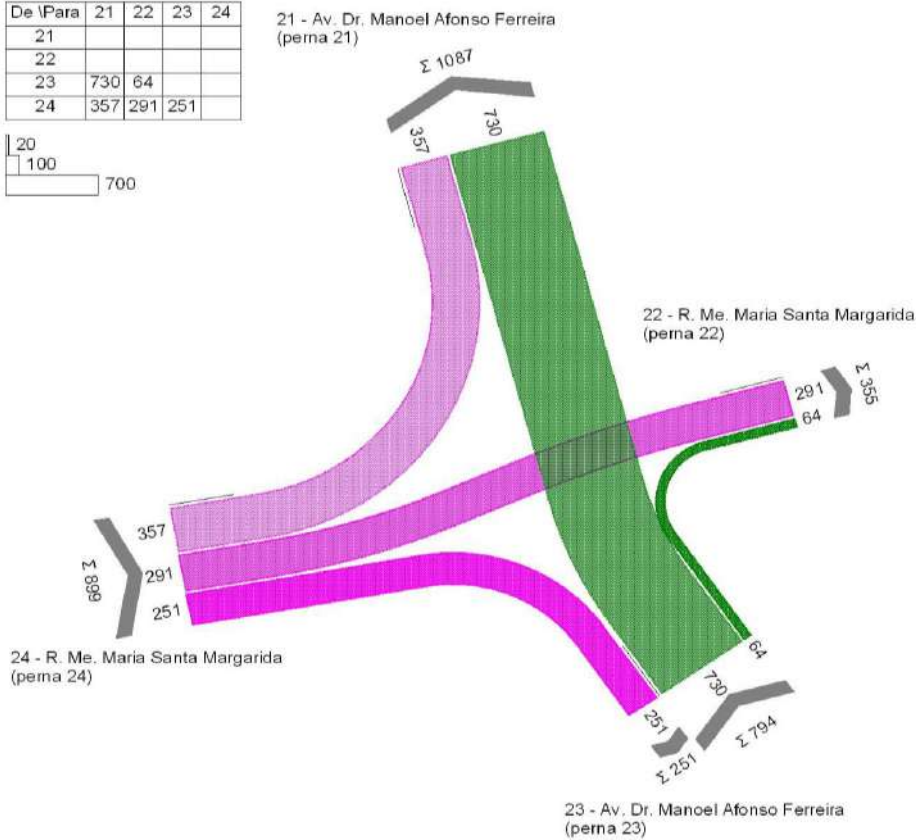


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019**

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 24.10.2019 07:00 - 24.10.2019 08:00
 1693 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 730 | 64 | | |
| 24 | 357 | 291 | 251 | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 24.10.2019 08:00 - 24.10.2019 09:00
 1567 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 672 | 49 | | |
| 24 | 458 | 206 | 182 | |

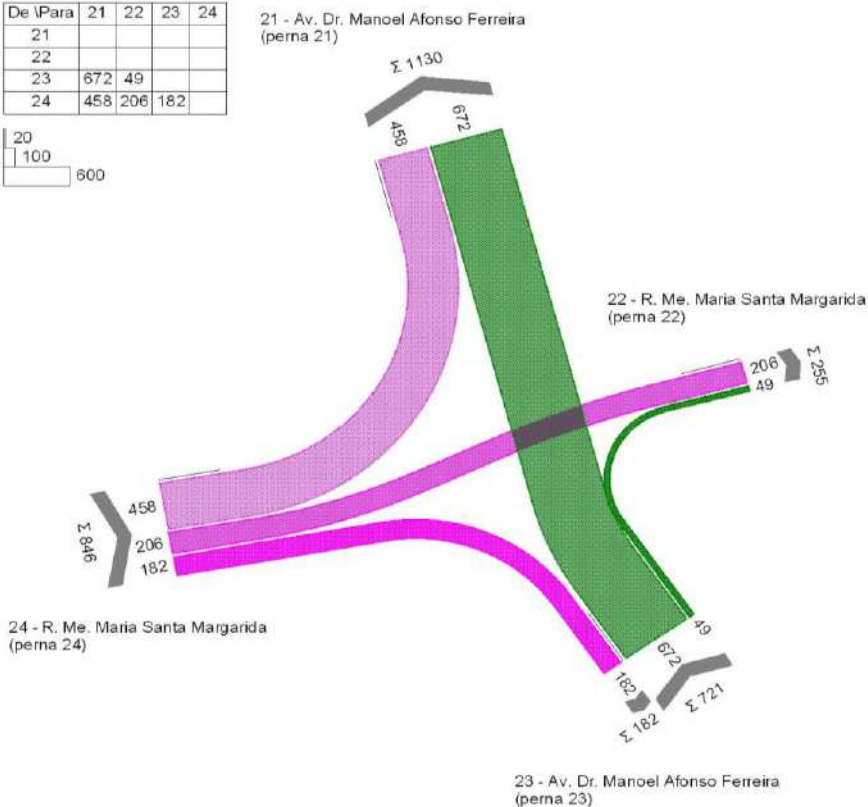
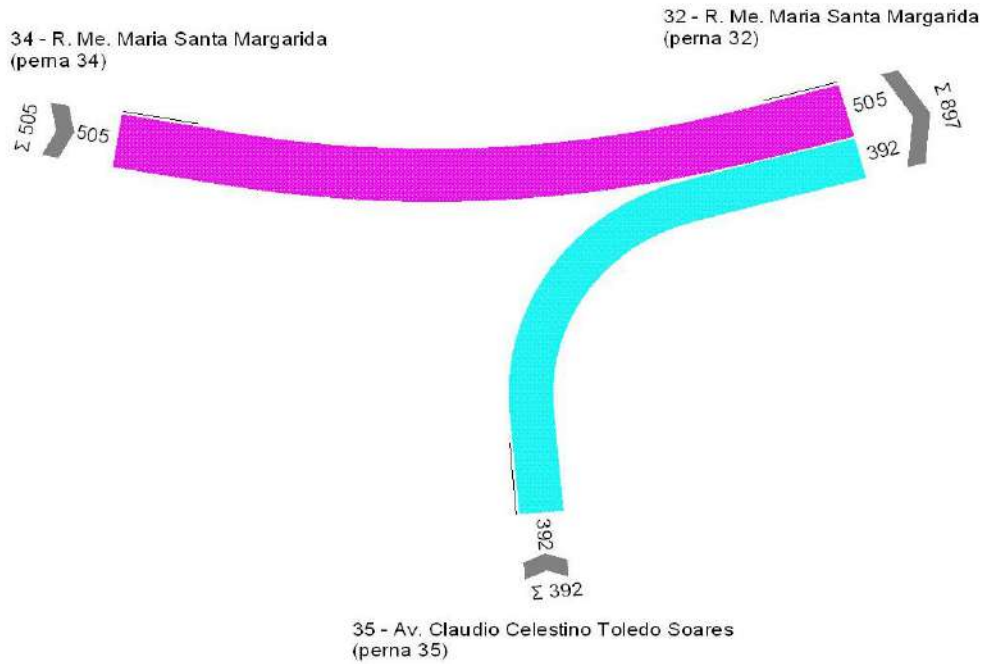
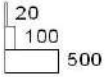


Diagrama de Fluxos **003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019**

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 07:00 - 08:00
 On the basis of a time period 24.10.2019 07:00 - 24.10.2019 08:00
 897 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 505 | | |
| 35 | 392 | | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 08:00 - 09:00
 On the basis of a time period 24.10.2019 08:00 - 24.10.2019 09:00
 840 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 496 | | |
| 35 | 344 | | |

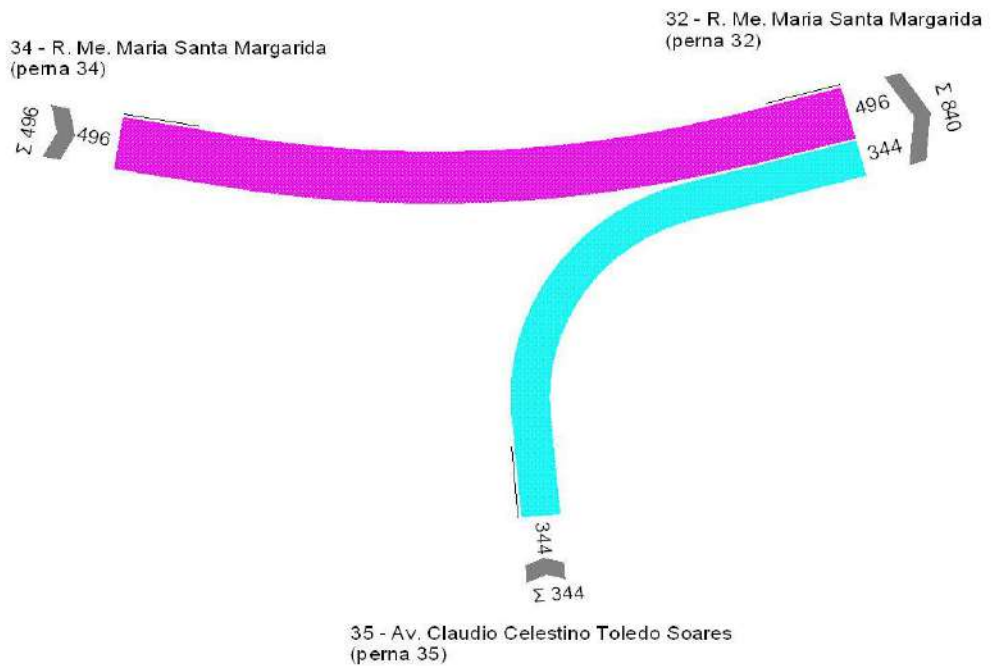


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 24.10.2019 09:00 - 24.10.2019 10:00
 1301 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 394 | 46 | | |
| 24 | 392 | 144 | 325 | |

20
 100
 300

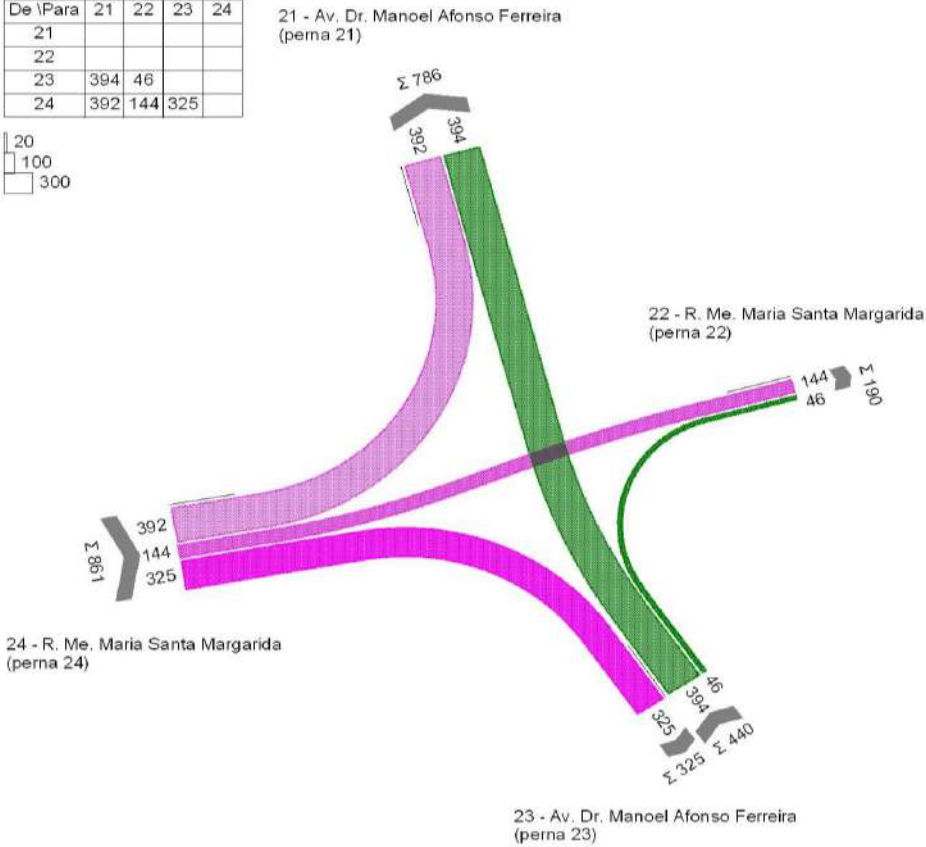


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/20

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 09:00 - 10:00
 On the basis of a time period 24.10.2019 09:00 - 24.10.2019 10:00
 860 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 541 | | |
| 35 | 319 | | |

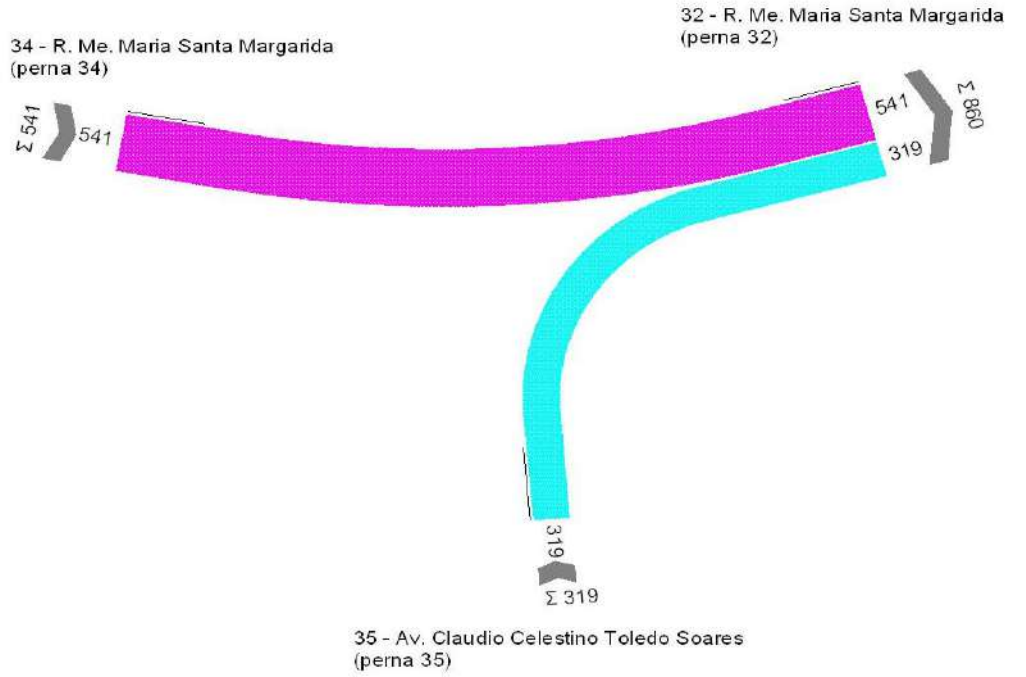
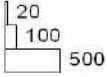
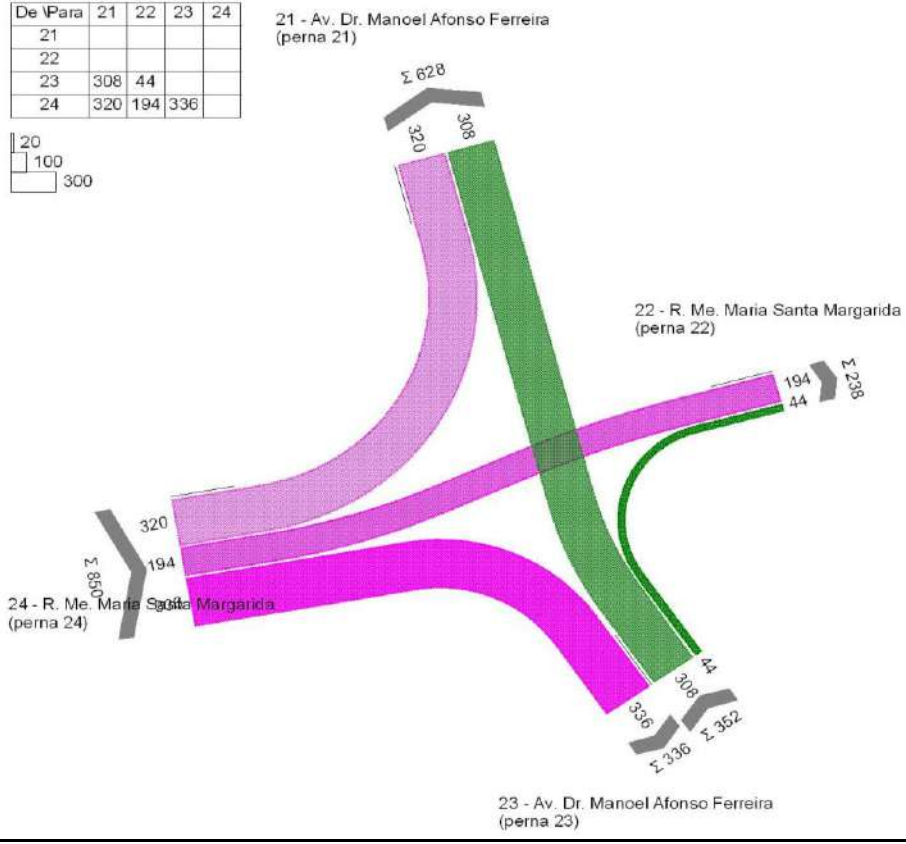


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 24.10.2019 11:00 - 24.10.2019 12:00
 1202 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 308 | 44 | | |
| 24 | 320 | 194 | 336 | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 24.10.2019 12:00 - 24.10.2019 13:00
 1364 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 391 | 66 | | |
| 24 | 386 | 242 | 279 | |

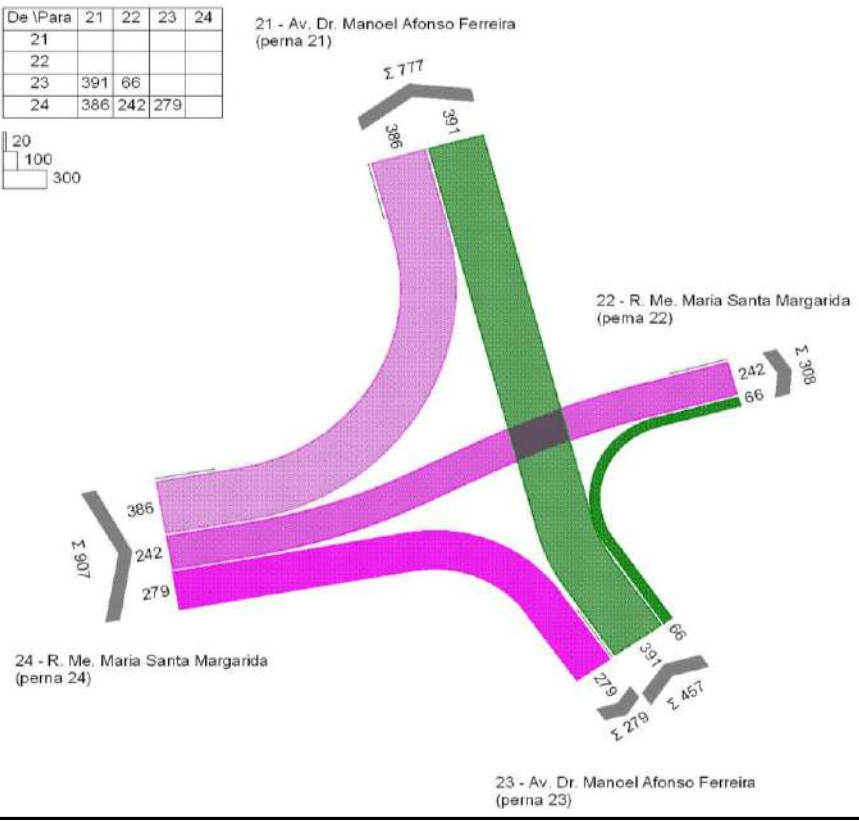
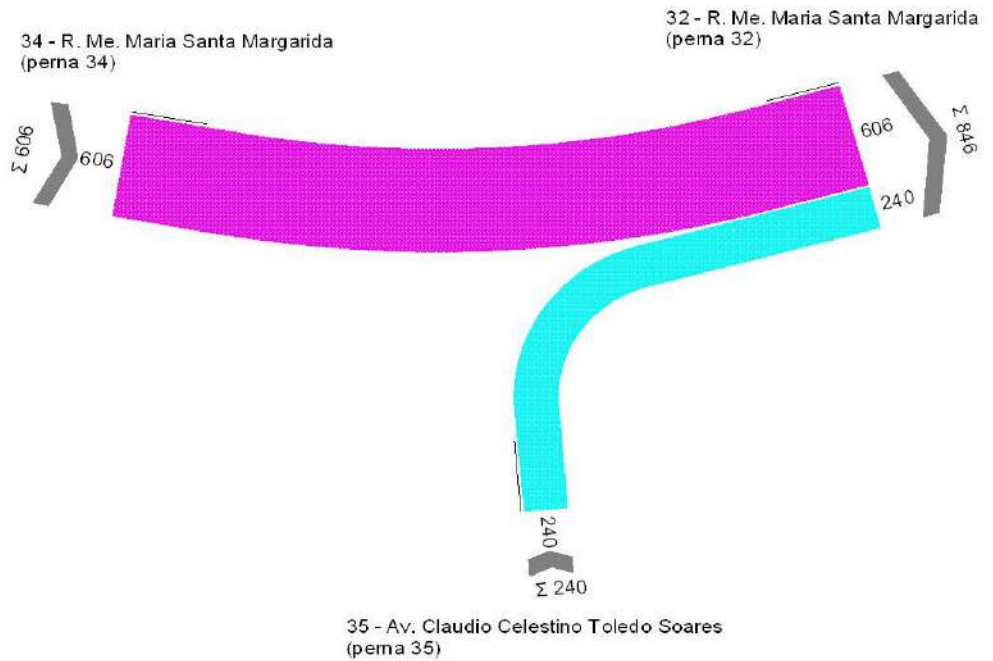


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 11:00 - 12:00
 On the basis of a time period 24.10.2019 11:00 - 24.10.2019 12:00
 846 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 606 | | |
| 35 | 240 | | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 12:00 - 13:00
 On the basis of a time period 24.10.2019 12:00 - 24.10.2019 13:00
 900 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 589 | | |
| 35 | 311 | | |

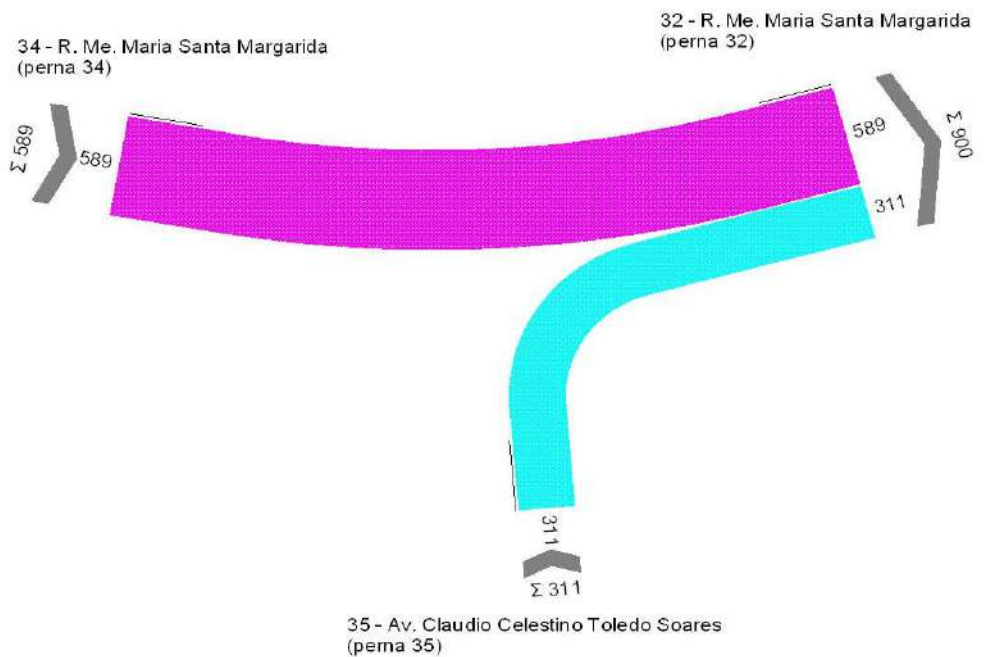
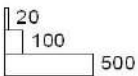


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 24.10.2019 13:00 - 24.10.2019 14:00
 1363 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 470 | 57 | | |
| 24 | 354 | 198 | 284 | |

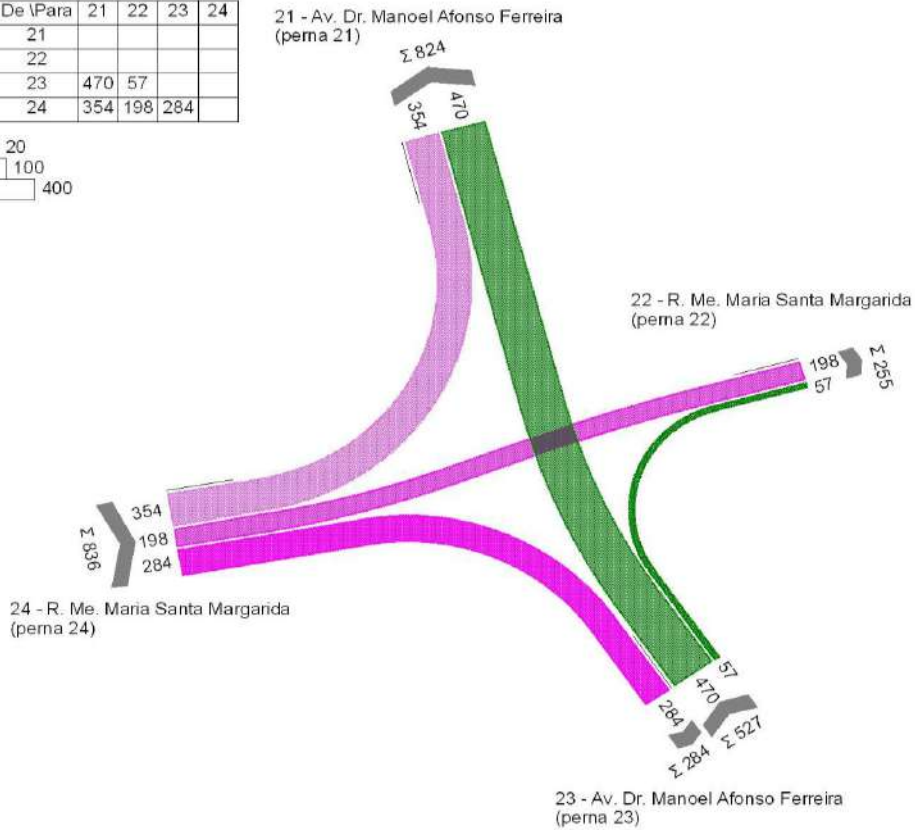


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 13:00 - 14:00
 On the basis of a time period 24.10.2019 13:00 - 24.10.2019 14:00
 827 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 540 | | |
| 35 | 287 | | |

| |
|-----|
| 20 |
| 100 |
| 500 |

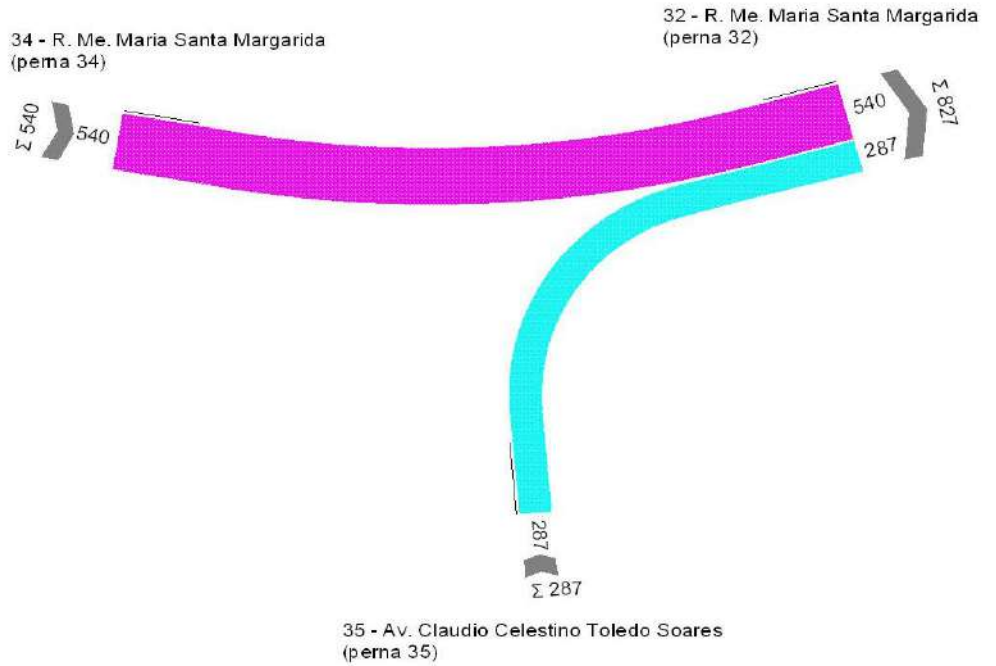
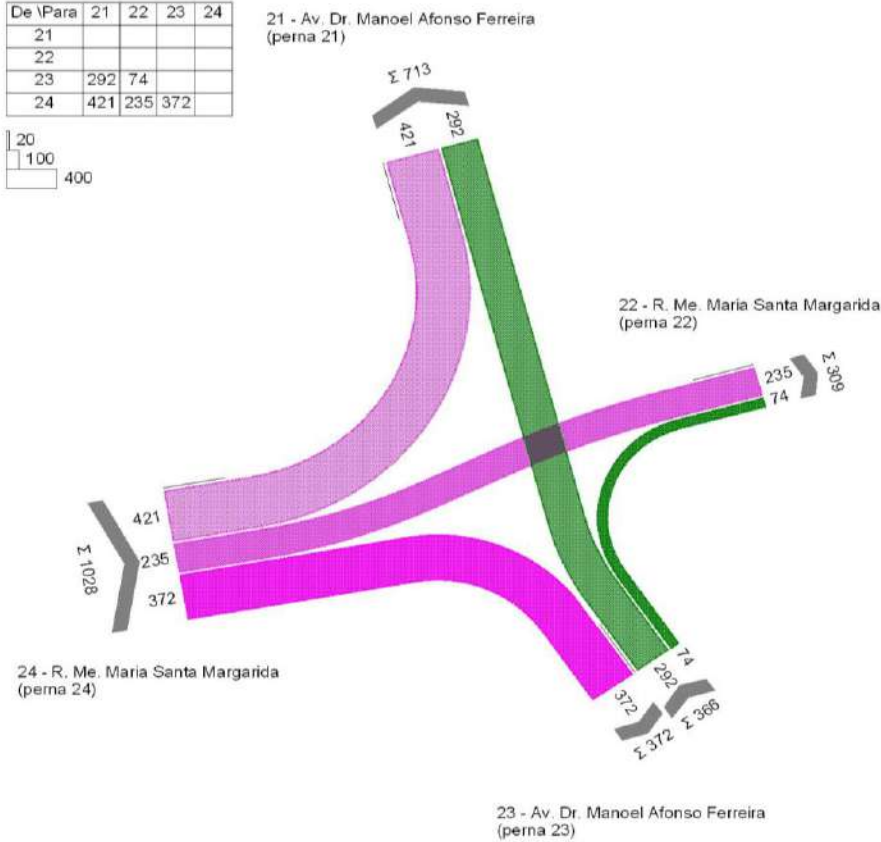


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 24.10.2019 17:00 - 24.10.2019 18:00
 1394 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 292 | 74 | | |
| 24 | 421 | 235 | 372 | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 24.10.2019 18:00 - 24.10.2019 19:00
 1438 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 332 | 57 | | |
| 24 | 365 | 186 | 498 | |

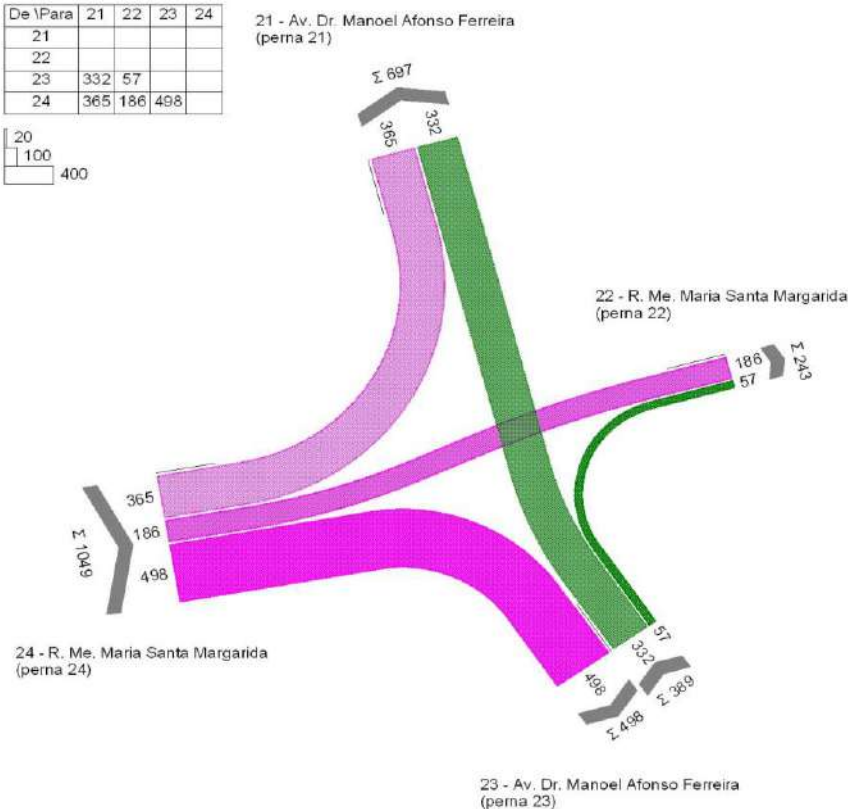
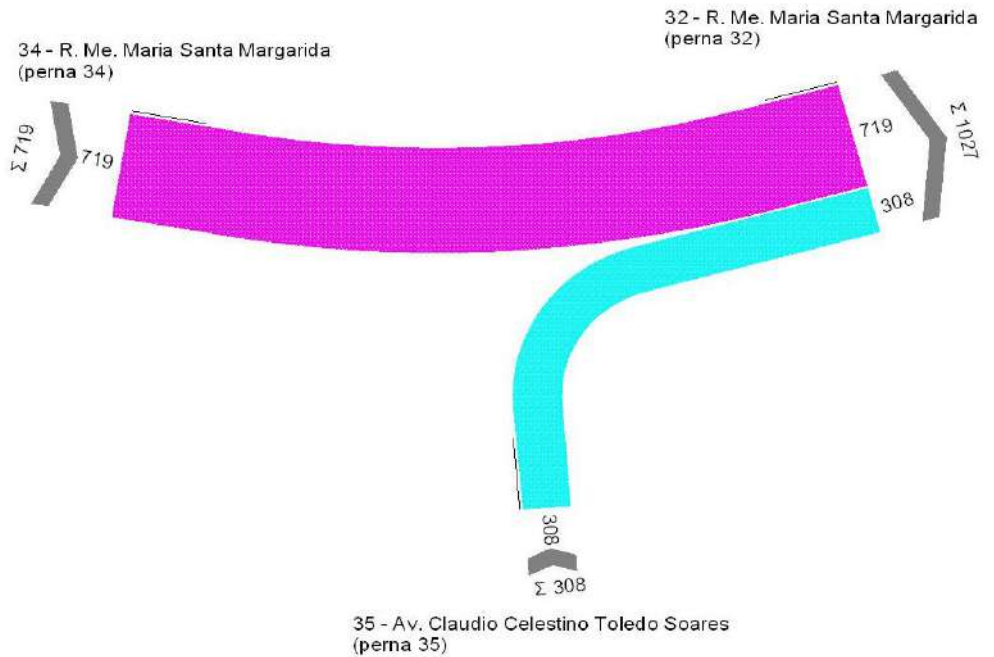


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 17:00 - 18:00
 On the basis of a time period 24.10.2019 17:00 - 24.10.2019 18:00
 1027 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 719 | | |
| 35 | 308 | | |



Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 18:00 - 19:00
 On the basis of a time period 24.10.2019 18:00 - 24.10.2019 19:00
 1038 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 748 | | |
| 35 | 290 | | |

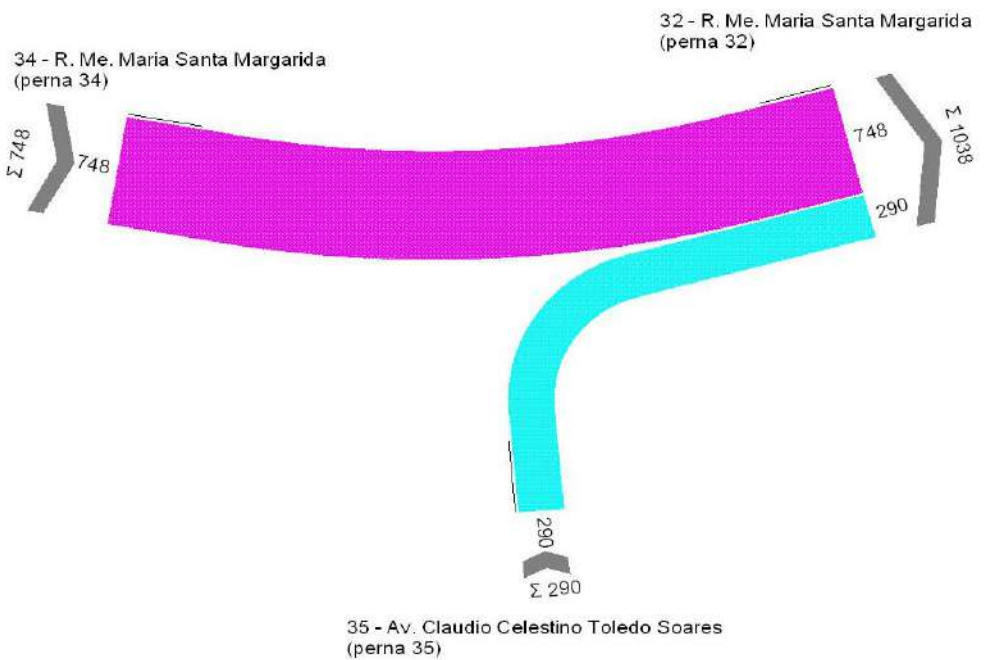
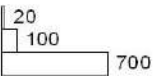


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 24.10.2019 19:00 - 24.10.2019 20:00
 1340 PCU

| De \ Para | 21 | 22 | 23 | 24 |
|-----------|-----|-----|-----|----|
| 21 | | | | |
| 22 | | | | |
| 23 | 325 | 74 | | |
| 24 | 294 | 144 | 503 | |

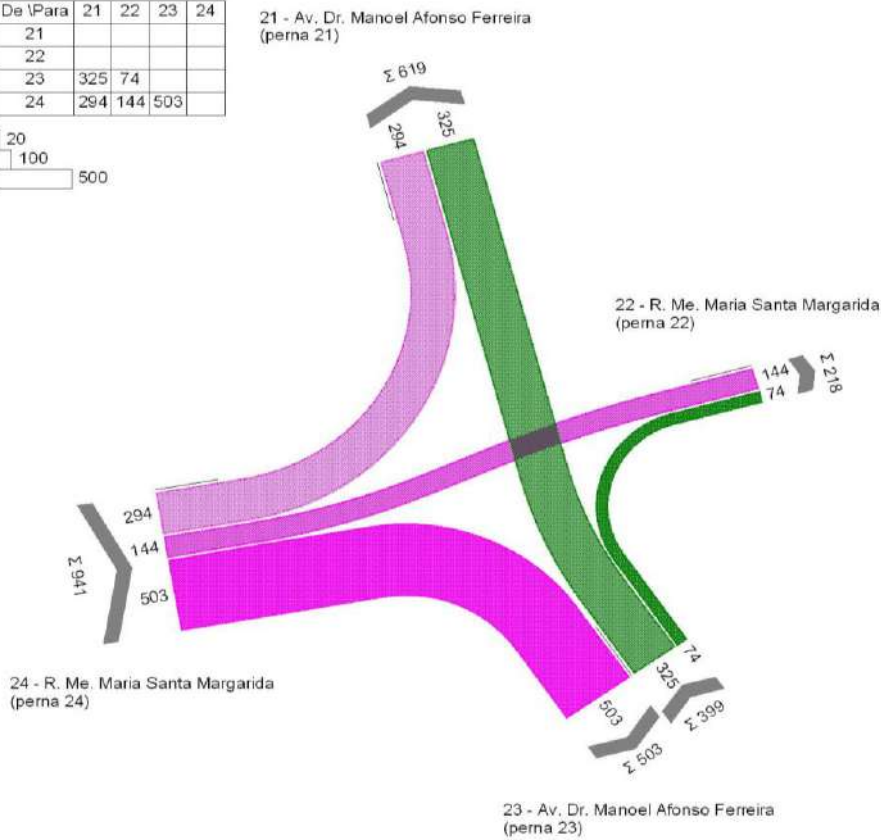
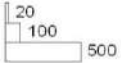
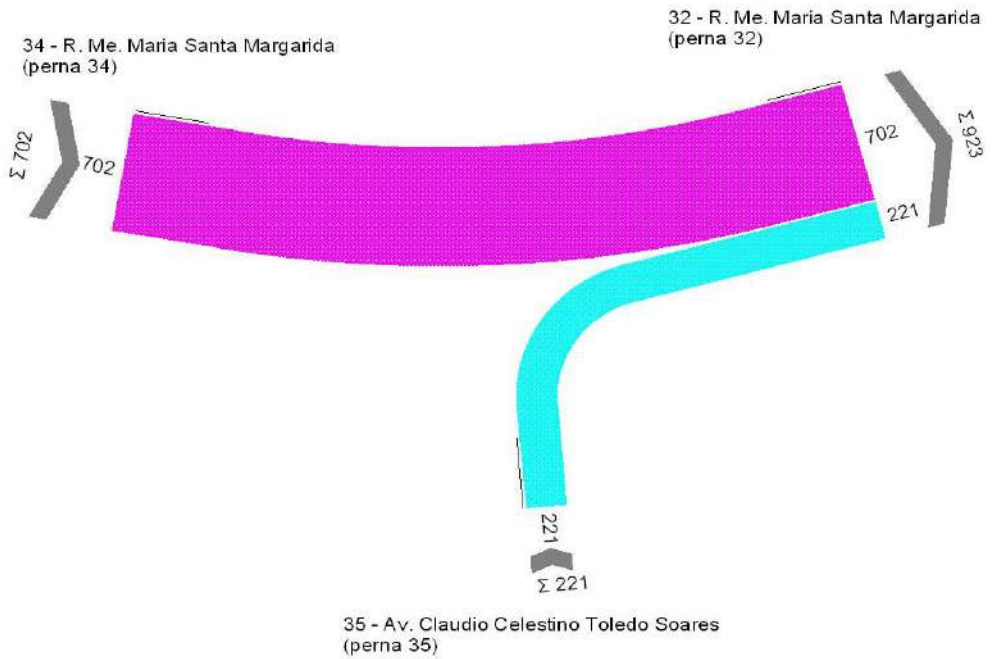
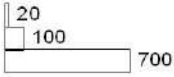


Diagrama de Fluxos 003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Contagem De 24-10-2019 as 00h00 até 25-10-2019 as 00h00
 Valor horário máximo 19:00 - 20:00
 On the basis of a time period 24.10.2019 19:00 - 24.10.2019 20:00
 923 PCU

| De \ Para | 32 | 34 | 35 |
|-----------|-----|----|----|
| 32 | | | |
| 34 | 702 | | |
| 35 | 221 | | |



PCU

003 - R. M. Maria Santa Margarida X Av. Dr. Manoel Afonso Ferreira - 24/10/2019

Nas tabelas de contagem de fluxo veicular a seguir são apresentadas a classificação pelos tipos de veículos como automóvel (**Car**), moto (**Moto**), ônibus (**Bus**) e caminhão (**Truck**).

Neste mesmo quadro estão representadas as contagens dos movimentos a cada 15 minutos e por hora, onde no final de cada quadro existem duas colunas que são identificadas pelas siglas **VEC** e **PCU**.

A sigla **VEC** é a somatória direta de todos os veículos contados sem fator de equivalência. A sigla **PCU**, significa Passenger Car Unit ou mais conhecido como veículos equivalentes, representa a somatória dos veículos com seus respectivos fatores de equivalência, sendo adotados conforme sugestão do manual HCM – High Capacity Manual, os seguintes valores:

- **Automóvel** = 1,0 veículo equivalente
- **Moto** = 0,5 veículo equivalente
- **Caminhão** = 2,5 veículos equivalentes
- **Ônibus** = 2,0 veículos equivalentes

Por exemplo: Na contagem de 1 automóvel, 1 moto, 1 ônibus e 1 caminhão temos como resultado 4 (quatro) **VEC** e 6 (seis) **PCU**, ou seja, 4 (quatro) veículos contados com a consideração dos fatores de equivalência, resultam em 6 (seis) veículos de passeio.

Obs.: Nas tabelas de fluxos veiculares, quando a somatória não resulta em número inteiro o mesmo será arredondado p/ cima.

Movimentos Contados

23 > 21 Av. Dr. Manoel Afonso Ferreira em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 685 | 0 | 15 | 4 | 0 | 731 | 704 |
| 8:00 | 9:00 | 635 | 0 | 10 | 6 | 0 | 672 | 651 |
| 9:00 | 10:00 | 360 | 0 | 13 | 1 | 0 | 395 | 374 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 267 | 0 | 13 | 4 | 0 | 308 | 284 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 367 | 0 | 8 | 2 | 0 | 391 | 377 |
| 13:00 | 14:00 | 444 | 0 | 8 | 3 | 0 | 470 | 455 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 265 | 0 | 7 | 5 | 0 | 293 | 277 |
| 18:00 | 19:00 | 290 | 0 | 11 | 7 | 0 | 332 | 308 |
| 19:00 | 20:00 | 277 | 0 | 12 | 9 | 0 | 325 | 298 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|---|
| Movimento Contado | |
| 23 > 21 | Av. Dr. Manoel Afonso Ferreira em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | Período Tarde | | | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|---------------|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|---|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 76 | 0 | 0 | 0 | 0 | 76 | 76 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 82 | 0 | 4 | 1 | 0 | 94 | 87 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 106 | 0 | 2 | 1 | 0 | 113 | 109 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 103 | 0 | 2 | 0 | 0 | 108 | 105 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 103 | 0 | 1 | 2 | 0 | 110 | 106 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 113 | 0 | 0 | 0 | 0 | 113 | 113 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 115 | 0 | 5 | 0 | 0 | 128 | 120 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 113 | 0 | 2 | 1 | 0 | 120 | 116 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 69 | 0 | 1 | 2 | 0 | 76 | 72 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 43 | 0 | 4 | 0 | 0 | 53 | 47 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 90 | 0 | 0 | 1 | 0 | 92 | 91 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 63 | 0 | 2 | 2 | 0 | 72 | 67 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 86 | 0 | 2 | 3 | 0 | 97 | 91 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 66 | 0 | 3 | 0 | 0 | 74 | 69 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 65 | 0 | 3 | 2 | 0 | 77 | 70 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 73 | 0 | 3 | 2 | 0 | 85 | 78 | |
| 7:00 | 7:15 | 161 | 0 | 2 | 0 | 0 | 166 | | 163 | 19:00 | 19:15 | 65 | 0 | 3 | 2 | 0 | 77 | 70 | |
| 7:15 | 7:30 | 158 | 0 | 5 | 2 | 0 | 175 | 731 | 165 | 19:15 | 19:30 | 59 | 0 | 3 | 2 | 0 | 71 | 64 | |
| 7:30 | 7:45 | 157 | 0 | 5 | 1 | 0 | 172 | | 163 | 19:30 | 19:45 | 89 | 0 | 5 | 0 | 0 | 102 | 94 | |
| 7:45 | 8:00 | 209 | 0 | 3 | 1 | 0 | 219 | | 213 | 19:45 | 20:00 | 64 | 0 | 1 | 5 | 0 | 77 | 70 | |
| 8:00 | 8:15 | 173 | 0 | 2 | 1 | 0 | 180 | | 176 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 153 | 0 | 2 | 2 | 0 | 162 | 672 | 157 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 146 | 0 | 4 | 2 | 0 | 160 | | 152 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 163 | 0 | 2 | 1 | 0 | 170 | | 166 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 120 | 0 | 1 | 0 | 0 | 123 | | 121 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 84 | 0 | 3 | 0 | 0 | 92 | 395 | 87 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 76 | 0 | 8 | 0 | 0 | 96 | | 84 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 80 | 0 | 1 | 1 | 0 | 85 | | 82 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 65 | 0 | 2 | 1 | 0 | 72 | 308 | 68 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 51 | 0 | 4 | 0 | 0 | 61 | | 55 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 78 | 0 | 2 | 3 | 0 | 89 | | 83 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 73 | 0 | 5 | 0 | 0 | 86 | | 78 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

23 > 22 Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 64 | 0 | 0 | 0 | 0 | 64 | 64 |
| 8:00 | 9:00 | 49 | 0 | 0 | 0 | 0 | 49 | 49 |
| 9:00 | 10:00 | 39 | 0 | 3 | 0 | 0 | 47 | 42 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 44 | 0 | 0 | 0 | 0 | 44 | 44 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 61 | 0 | 2 | 0 | 0 | 66 | 63 |
| 13:00 | 14:00 | 52 | 0 | 2 | 0 | 0 | 57 | 54 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 72 | 0 | 1 | 0 | 0 | 75 | 73 |
| 18:00 | 19:00 | 52 | 0 | 2 | 0 | 0 | 57 | 54 |
| 19:00 | 20:00 | 60 | 0 | 3 | 3 | 0 | 74 | 66 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
23 > 22
Av. Dr. Manoel Afonso Ferreira conv à dir. R. M. Maria Santa Margarida
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 12 | 0 | 1 | 0 | 0 | 15 | 13 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 17 | 0 | 0 | 0 | 0 | 17 | 17 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 13 | 0 | 1 | 0 | 0 | 16 | 14 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 19 | 0 | 0 | 0 | 0 | 19 | 19 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 16 | 0 | 0 | 0 | 0 | 16 | 16 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 13 | 0 | 1 | 0 | 0 | 16 | 14 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 11 | 0 | 0 | 0 | 0 | 11 | 11 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 12 | 0 | 1 | 0 | 0 | 15 | 13 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 15 | 0 | 1 | 0 | 0 | 18 | 16 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 21 | 0 | 0 | 0 | 0 | 21 | 21 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 19 | 0 | 0 | 0 | 0 | 19 | 19 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 17 | 0 | 0 | 0 | 0 | 17 | 17 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 15 | 0 | 1 | 0 | 0 | 18 | 16 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 10 | 0 | 0 | 0 | 0 | 10 | 10 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 11 | 0 | 1 | 0 | 0 | 14 | 12 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 16 | 0 | 0 | 0 | 0 | 16 | 16 |
| 7:00 | 7:15 | 21 | 0 | 0 | 0 | 0 | 21 | 21 | 19:00 | 19:15 | 13 | 0 | 0 | 1 | 0 | 15 | 14 |
| 7:15 | 7:30 | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 19:15 | 19:30 | 21 | 0 | 2 | 0 | 0 | 26 | 23 |
| 7:30 | 7:45 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 19:30 | 19:45 | 14 | 0 | 0 | 1 | 0 | 16 | 15 |
| 7:45 | 8:00 | 15 | 0 | 0 | 0 | 0 | 15 | 15 | 19:45 | 20:00 | 12 | 0 | 1 | 1 | 0 | 17 | 14 |
| 8:00 | 8:15 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 14 | 0 | 0 | 0 | 0 | 14 | 14 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 | 8:45 | 10 | 0 | 0 | 0 | 0 | 10 | 10 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 | 9:00 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 | 9:15 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 11 | 0 | 2 | 0 | 0 | 16 | 13 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 | 9:45 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 | 10:00 | 10 | 0 | 1 | 0 | 0 | 13 | 11 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 11:15 | 13 | 0 | 0 | 0 | 0 | 13 | 13 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:30 | 11:45 | 9 | 0 | 0 | 0 | 0 | 9 | 9 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45 | 12:00 | 11 | 0 | 0 | 0 | 0 | 11 | 11 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

24 > 21 R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 350 | 0 | 2 | 1 | 0 | 357 | 353 |
| 8:00 | 9:00 | 443 | 0 | 6 | 0 | 0 | 458 | 449 |
| 9:00 | 10:00 | 379 | 0 | 5 | 0 | 0 | 392 | 384 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 308 | 0 | 3 | 2 | 0 | 320 | 313 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 362 | 0 | 9 | 1 | 0 | 387 | 372 |
| 13:00 | 14:00 | 337 | 0 | 5 | 2 | 0 | 354 | 344 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 414 | 0 | 2 | 1 | 0 | 421 | 417 |
| 18:00 | 19:00 | 356 | 0 | 2 | 2 | 0 | 365 | 360 |
| 19:00 | 20:00 | 280 | 0 | 3 | 3 | 0 | 294 | 286 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

24 > 21

R. M. Maria Santa Margarida conv à esq. Av. Dr. Manoel Afonso Ferreira

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 99 | 0 | 2 | 1 | 0 | 106 | | 102 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 91 | 0 | 0 | 0 | 0 | 91 | 387 | 91 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 84 | 0 | 6 | 0 | 0 | 99 | | 90 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 88 | 0 | 1 | 0 | 0 | 91 | | 89 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 93 | 0 | 2 | 1 | 0 | 100 | 354 | 96 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 85 | 0 | 0 | 1 | 0 | 87 | | 86 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:30 | 13:45 | 81 | 0 | 2 | 0 | 0 | 86 | | 83 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 78 | 0 | 1 | 0 | 0 | 81 | | 79 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 118 | 0 | 1 | 0 | 0 | 121 | 421 | 119 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 112 | 0 | 0 | 1 | 0 | 114 | | 113 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:30 | 17:45 | 92 | 0 | 1 | 0 | 0 | 95 | | 93 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 92 | 0 | 0 | 0 | 0 | 92 | | 92 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 90 | 0 | 1 | 1 | 0 | 95 | 365 | 92 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 89 | 0 | 0 | 0 | 0 | 89 | | 89 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:30 | 18:45 | 90 | 0 | 0 | 1 | 0 | 92 | | 91 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 87 | 0 | 1 | 0 | 0 | 90 | | 88 |
| 7:00 | 7:15 | 73 | 0 | 1 | 1 | 0 | 78 | | 75 | 19:00 | 19:15 | 84 | 0 | 0 | 1 | 0 | 86 | 294 | 85 |
| 7:15 | 7:30 | 87 | 0 | 0 | 0 | 0 | 87 | 357 | 87 | 19:15 | 19:30 | 78 | 0 | 1 | 0 | 0 | 81 | | 79 |
| 7:30 | 7:45 | 92 | 0 | 1 | 0 | 0 | 95 | | 93 | 19:30 | 19:45 | 60 | 0 | 0 | 1 | 0 | 62 | | 61 |
| 7:45 | 8:00 | 98 | 0 | 0 | 0 | 0 | 98 | | 98 | 19:45 | 20:00 | 58 | 0 | 2 | 1 | 0 | 65 | | 61 |
| 8:00 | 8:15 | 103 | 0 | 2 | 0 | 0 | 108 | | 105 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 114 | 0 | 1 | 0 | 0 | 117 | 458 | 115 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 112 | 0 | 1 | 0 | 0 | 115 | | 113 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 114 | 0 | 2 | 0 | 0 | 119 | | 116 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 101 | 0 | 0 | 0 | 0 | 101 | | 101 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 91 | 0 | 1 | 0 | 0 | 94 | 392 | 92 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 93 | 0 | 1 | 0 | 0 | 96 | | 94 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 94 | 0 | 3 | 0 | 0 | 102 | | 97 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 71 | 0 | 1 | 0 | 0 | 74 | | 72 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 74 | 0 | 0 | 1 | 0 | 76 | 320 | 75 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 78 | 0 | 1 | 0 | 0 | 81 | | 79 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 85 | 0 | 1 | 1 | 0 | 90 | | 87 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

24 > 22 R. M. Maria Santa Margarida em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 268 | 0 | 6 | 4 | 0 | 291 | 278 |
| 8:00 | 9:00 | 189 | 0 | 6 | 1 | 0 | 206 | 196 |
| 9:00 | 10:00 | 129 | 0 | 5 | 1 | 0 | 144 | 135 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 187 | 0 | 3 | 0 | 0 | 195 | 190 |

| Período Tarde | | | | | | | | |
|---------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 232 | 0 | 4 | 0 | 0 | 242 | 236 |
| 13:00 | 14:00 | 191 | 0 | 3 | 0 | 0 | 199 | 194 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 233 | 0 | 0 | 1 | 0 | 235 | 234 |
| 18:00 | 19:00 | 184 | 0 | 0 | 1 | 0 | 186 | 185 |
| 19:00 | 20:00 | 132 | 0 | 3 | 2 | 0 | 144 | 137 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado

24 > 22

R. M. Maria Santa Margarida em frente

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 72 | 0 | 0 | 0 | 0 | 72 | | 72 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 55 | 0 | 2 | 0 | 0 | 60 | 242 | 57 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 53 | 0 | 0 | 0 | 0 | 53 | | 53 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 52 | 0 | 2 | 0 | 0 | 57 | | 54 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 50 | 0 | 1 | 0 | 0 | 53 | 199 | 51 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 54 | 0 | 0 | 0 | 0 | 54 | | 54 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 43 | 0 | 1 | 0 | 0 | 46 | | 44 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 44 | 0 | 1 | 0 | 0 | 47 | | 45 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 60 | 0 | 0 | 1 | 0 | 62 | 235 | 61 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 57 | 0 | 0 | 0 | 0 | 57 | | 57 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 61 | 0 | 0 | 0 | 0 | 61 | | 61 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 55 | 0 | 0 | 0 | 0 | 55 | | 55 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 47 | 0 | 0 | 0 | 0 | 47 | 186 | 47 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 51 | 0 | 0 | 0 | 0 | 51 | | 51 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 42 | 0 | 0 | 1 | 0 | 44 | | 43 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 44 | 0 | 0 | 0 | 0 | 44 | | 44 |
| 7:00 | 7:15 | 103 | 0 | 1 | 1 | 0 | 108 | | 105 | 19:00 | 19:15 | 39 | 0 | 0 | 1 | 0 | 41 | 144 | 40 |
| 7:15 | 7:30 | 60 | 0 | 1 | 2 | 0 | 67 | 291 | 63 | 19:15 | 19:30 | 31 | 0 | 1 | 0 | 0 | 34 | | 32 |
| 7:30 | 7:45 | 53 | 0 | 3 | 0 | 0 | 61 | | 56 | 19:30 | 19:45 | 35 | 0 | 2 | 0 | 0 | 40 | | 37 |
| 7:45 | 8:00 | 52 | 0 | 1 | 1 | 0 | 57 | | 54 | 19:45 | 20:00 | 27 | 0 | 0 | 1 | 0 | 29 | | 28 |
| 8:00 | 8:15 | 49 | 0 | 2 | 0 | 0 | 54 | | 51 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 42 | 0 | 1 | 0 | 0 | 45 | 206 | 43 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 43 | 0 | 1 | 0 | 0 | 46 | | 44 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 55 | 0 | 2 | 1 | 0 | 62 | | 58 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 38 | 0 | 1 | 0 | 0 | 41 | | 39 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 34 | 0 | 1 | 1 | 0 | 39 | 144 | 36 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 30 | 0 | 2 | 0 | 0 | 35 | | 32 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 27 | 0 | 1 | 0 | 0 | 30 | | 28 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 35 | 0 | 0 | 0 | 0 | 35 | | 35 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 41 | 0 | 1 | 0 | 0 | 44 | 195 | 42 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 50 | 0 | 2 | 0 | 0 | 55 | | 52 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 61 | 0 | 0 | 0 | 0 | 61 | | 61 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

24 > 23 R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 242 | 0 | 2 | 2 | 0 | 251 | 246 |
| 8:00 | 9:00 | 157 | 0 | 9 | 1 | 0 | 182 | 167 |
| 9:00 | 10:00 | 290 | 0 | 10 | 5 | 0 | 325 | 305 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 316 | 0 | 8 | 0 | 0 | 336 | 324 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 248 | 0 | 10 | 3 | 0 | 279 | 261 |
| 13:00 | 14:00 | 260 | 0 | 9 | 1 | 0 | 285 | 270 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 362 | 0 | 3 | 1 | 0 | 372 | 366 |
| 18:00 | 19:00 | 477 | 0 | 3 | 7 | 0 | 499 | 487 |
| 19:00 | 20:00 | 484 | 0 | 2 | 7 | 0 | 503 | 493 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
24 > 23
R. M. Maria Santa Margarida conv à dir. Av. Dr. Manoel Afonso Ferreira
Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:00 | 12:15 | 44 | 0 | 3 | 1 | 0 | 54 | | 48 |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:15 | 12:30 | 63 | 0 | 5 | 0 | 0 | 76 | 279 | 68 |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 72 | 0 | 1 | 1 | 0 | 77 | | 74 |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 12:45 | 13:00 | 69 | 0 | 1 | 1 | 0 | 74 | | 71 |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:00 | 13:15 | 70 | 0 | 1 | 0 | 0 | 73 | 285 | 71 |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:15 | 13:30 | 51 | 0 | 5 | 0 | 0 | 64 | | 56 |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 58 | 0 | 1 | 1 | 0 | 63 | | 60 |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 13:45 | 14:00 | 81 | 0 | 2 | 0 | 0 | 86 | | 83 |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:00 | 17:15 | 76 | 0 | 1 | 0 | 0 | 79 | 372 | 77 |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:15 | 17:30 | 84 | 0 | 0 | 1 | 0 | 86 | | 85 |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 99 | 0 | 2 | 0 | 0 | 104 | | 101 |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 17:45 | 18:00 | 103 | 0 | 0 | 0 | 0 | 103 | | 103 |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:00 | 18:15 | 119 | 0 | 1 | 1 | 0 | 124 | 499 | 121 |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:15 | 18:30 | 124 | 0 | 2 | 2 | 0 | 133 | | 128 |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 117 | 0 | 0 | 1 | 0 | 119 | | 118 |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 18:45 | 19:00 | 117 | 0 | 0 | 3 | 0 | 123 | | 120 |
| 7:00 | 7:15 | 54 | 0 | 0 | 0 | 0 | 54 | | 54 | 19:00 | 19:15 | 132 | 0 | 1 | 2 | 0 | 139 | 503 | 135 |
| 7:15 | 7:30 | 74 | 0 | 1 | 2 | 0 | 81 | 251 | 77 | 19:15 | 19:30 | 152 | 0 | 0 | 2 | 0 | 156 | | 154 |
| 7:30 | 7:45 | 67 | 0 | 1 | 0 | 0 | 70 | | 68 | 19:30 | 19:45 | 111 | 0 | 1 | 2 | 0 | 118 | | 114 |
| 7:45 | 8:00 | 47 | 0 | 0 | 0 | 0 | 47 | | 47 | 19:45 | 20:00 | 89 | 0 | 0 | 1 | 0 | 91 | | 90 |
| 8:00 | 8:15 | 47 | 0 | 0 | 1 | 0 | 49 | | 48 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8:30 | 20 | 0 | 2 | 0 | 0 | 25 | 182 | 22 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:30 | 8:45 | 52 | 0 | 6 | 0 | 0 | 67 | | 58 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 8:45 | 9:00 | 38 | 0 | 1 | 0 | 0 | 41 | | 39 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:00 | 9:15 | 81 | 0 | 2 | 2 | 0 | 90 | | 85 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 | 9:30 | 76 | 0 | 3 | 1 | 0 | 86 | 325 | 80 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:30 | 9:45 | 70 | 0 | 2 | 1 | 0 | 77 | | 73 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 9:45 | 10:00 | 63 | 0 | 3 | 1 | 0 | 73 | | 67 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:00 | 11:15 | 83 | 0 | 0 | 0 | 0 | 83 | | 83 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:15 | 11:30 | 81 | 0 | 3 | 0 | 0 | 89 | 336 | 84 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:30 | 11:45 | 81 | 0 | 1 | 0 | 0 | 84 | | 82 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| 11:45 | 12:00 | 71 | 0 | 4 | 0 | 0 | 81 | | 75 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |

Movimento Contado

34 > 32 R. M. Maria Santa Margarida em frente



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | 485 | 0 | 4 | 5 | 0 | 505 | 494 |
| 8:00 | 9:00 | 462 | 0 | 13 | 1 | 0 | 497 | 476 |
| 9:00 | 10:00 | 505 | 0 | 12 | 3 | 0 | 541 | 520 |
| 10:00 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | 579 | 0 | 11 | 0 | 0 | 607 | 590 |

| Período Tarde | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | 552 | 0 | 14 | 1 | 0 | 589 | 567 |
| 13:00 | 14:00 | 516 | 0 | 9 | 1 | 0 | 541 | 526 |
| 14:00 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | 708 | 0 | 2 | 3 | 0 | 719 | 713 |
| 18:00 | 19:00 | 727 | 0 | 2 | 8 | 0 | 748 | 737 |
| 19:00 | 20:00 | 675 | 0 | 3 | 10 | 0 | 703 | 688 |
| 20:00 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | |
|--------------------------|--|
| Movimento Contado | |
| 34 > 32 | R. M. Maria Santa Margarida em frente |

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|
| Período de até | | Car | - | Truck | Bus | - | PCU | | VEC | Período de até | | Car | - | Truck | Bus | - | PCU | | VEC |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 144 | 0 | 4 | 0 | 0 | 154 | 148 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 137 | 0 | 5 | 0 | 0 | 150 | 142 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 139 | 0 | 2 | 1 | 0 | 146 | 142 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 132 | 0 | 3 | 0 | 0 | 140 | 135 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 135 | 0 | 4 | 0 | 0 | 145 | 139 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 131 | 0 | 2 | 0 | 0 | 136 | 133 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 127 | 0 | 1 | 1 | 0 | 132 | 129 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 123 | 0 | 2 | 0 | 0 | 128 | 125 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 188 | 0 | 1 | 1 | 0 | 193 | 190 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 169 | 0 | 0 | 2 | 0 | 173 | 171 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 183 | 0 | 1 | 0 | 0 | 186 | 184 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 168 | 0 | 0 | 0 | 0 | 168 | 168 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 176 | 0 | 0 | 2 | 0 | 180 | 178 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 184 | 0 | 2 | 2 | 0 | 193 | 188 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 178 | 0 | 0 | 1 | 0 | 180 | 179 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 189 | 0 | 0 | 3 | 0 | 195 | 192 | |
| 7:00 | 7:15 | 138 | 0 | 2 | 2 | 0 | 147 | 142 | 494 | 19:00 | 19:15 | 184 | 0 | 1 | 4 | 0 | 195 | 189 | |
| 7:15 | 7:30 | 134 | 0 | 1 | 2 | 0 | 141 | 137 | 494 | 19:15 | 19:30 | 204 | 0 | 1 | 2 | 0 | 211 | 207 | |
| 7:30 | 7:45 | 109 | 0 | 1 | 0 | 0 | 112 | 110 | 494 | 19:30 | 19:45 | 155 | 0 | 1 | 3 | 0 | 164 | 159 | |
| 7:45 | 8:00 | 104 | 0 | 0 | 1 | 0 | 106 | 105 | 494 | 19:45 | 20:00 | 132 | 0 | 0 | 1 | 0 | 134 | 133 | |
| 8:00 | 8:15 | 105 | 0 | 3 | 1 | 0 | 115 | 109 | 476 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 102 | 0 | 2 | 0 | 0 | 107 | 104 | 476 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 128 | 0 | 6 | 0 | 0 | 143 | 134 | 476 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 127 | 0 | 2 | 0 | 0 | 132 | 129 | 476 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 135 | 0 | 2 | 0 | 0 | 140 | 137 | 520 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 125 | 0 | 3 | 2 | 0 | 137 | 130 | 520 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 128 | 0 | 2 | 1 | 0 | 135 | 131 | 520 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 117 | 0 | 5 | 0 | 0 | 130 | 122 | 520 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 140 | 0 | 1 | 0 | 0 | 143 | 141 | 590 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 143 | 0 | 3 | 0 | 0 | 151 | 146 | 590 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 146 | 0 | 4 | 0 | 0 | 156 | 150 | 590 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 150 | 0 | 3 | 0 | 0 | 158 | 153 | 590 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Movimento Contado

35 > 32 Av. Claudio Celestino Toledo Soares



Fluxo veicular a cada hora

| Período Manhã | | | | | | | | | |
|---------------|-------|-----|-----|---|-------|-----|---|-----|-----|
| Período de | | até | Car | - | Truck | Bus | - | PCU | VEC |
| 0:00 | 1:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1:00 | 2:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 | 3:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 4:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 5:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 | 6:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6:00 | 7:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:00 | 8:00 | | 375 | 0 | 5 | 2 | 0 | 392 | 382 |
| 8:00 | 9:00 | | 327 | 0 | 7 | 0 | 0 | 345 | 334 |
| 9:00 | 10:00 | | 293 | 0 | 8 | 3 | 0 | 319 | 304 |
| 10:00 | 11:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 12:00 | | 232 | 0 | 3 | 0 | 0 | 240 | 235 |

| Período Tarde | | | | | | | | | |
|---------------|-------|-----|-----|---|-------|-----|---|-----|-----|
| Período de | | até | Car | - | Truck | Bus | - | PCU | VEC |
| 12:00 | 13:00 | | 290 | 0 | 6 | 3 | 0 | 311 | 299 |
| 13:00 | 14:00 | | 272 | 0 | 6 | 0 | 0 | 287 | 278 |
| 14:00 | 15:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15:00 | 16:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:00 | 17:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00 | 18:00 | | 301 | 0 | 3 | 0 | 0 | 309 | 304 |
| 18:00 | 19:00 | | 290 | 0 | 0 | 0 | 0 | 290 | 290 |
| 19:00 | 20:00 | | 221 | 0 | 0 | 0 | 0 | 221 | 221 |
| 20:00 | 21:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21:00 | 22:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:00 | 23:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:00 | 0:00 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Movimento Contado
35 > 32 **Av. Claudio Celestino Toletto Soares**

Fluxo veicular a cada 15 minutos

| Período Manhã | | | | | | | | | | Período Tarde | | | | | | | | | |
|----------------|-------|-----|---|-------|-----|---|-----|-----|-----|----------------|-------|-----|---|-------|-----|---|-----|-----|--|
| Período de até | | Car | - | Truck | Bus | - | PCU | VEC | | Período de até | | Car | - | Truck | Bus | - | PCU | VEC | |
| 0:00 | 0:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:00 | 12:15 | 71 | 0 | 1 | 2 | 0 | 78 | 74 | |
| 0:15 | 0:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:15 | 12:30 | 72 | 0 | 2 | 0 | 0 | 77 | 74 | |
| 0:30 | 0:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:30 | 12:45 | 70 | 0 | 2 | 0 | 0 | 75 | 72 | |
| 0:45 | 1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12:45 | 13:00 | 77 | 0 | 1 | 1 | 0 | 82 | 79 | |
| 1:00 | 1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:00 | 13:15 | 78 | 0 | 0 | 0 | 0 | 78 | 78 | |
| 1:15 | 1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:15 | 13:30 | 59 | 0 | 3 | 0 | 0 | 67 | 62 | |
| 1:30 | 1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:30 | 13:45 | 55 | 0 | 1 | 0 | 0 | 58 | 56 | |
| 1:45 | 2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13:45 | 14:00 | 80 | 0 | 2 | 0 | 0 | 85 | 82 | |
| 2:00 | 2:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:00 | 14:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:15 | 2:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:15 | 14:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:30 | 2:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:30 | 14:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2:45 | 3:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14:45 | 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:00 | 3:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:00 | 15:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:15 | 3:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:15 | 15:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:30 | 3:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:30 | 15:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3:45 | 4:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15:45 | 16:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:00 | 4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:00 | 16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:15 | 4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:15 | 16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:30 | 4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:30 | 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4:45 | 5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16:45 | 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5:00 | 5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:00 | 17:15 | 66 | 0 | 1 | 0 | 0 | 69 | 67 | |
| 5:15 | 5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:15 | 17:30 | 84 | 0 | 0 | 0 | 0 | 84 | 84 | |
| 5:30 | 5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:30 | 17:45 | 69 | 0 | 2 | 0 | 0 | 74 | 71 | |
| 5:45 | 6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17:45 | 18:00 | 82 | 0 | 0 | 0 | 0 | 82 | 82 | |
| 6:00 | 6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:00 | 18:15 | 80 | 0 | 0 | 0 | 0 | 80 | 80 | |
| 6:15 | 6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:15 | 18:30 | 80 | 0 | 0 | 0 | 0 | 80 | 80 | |
| 6:30 | 6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:30 | 18:45 | 71 | 0 | 0 | 0 | 0 | 71 | 71 | |
| 6:45 | 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18:45 | 19:00 | 59 | 0 | 0 | 0 | 0 | 59 | 59 | |
| 7:00 | 7:15 | 92 | 0 | 0 | 0 | 0 | 92 | 92 | 92 | 19:00 | 19:15 | 71 | 0 | 0 | 0 | 0 | 71 | 71 | |
| 7:15 | 7:30 | 87 | 0 | 1 | 2 | 0 | 94 | 90 | 90 | 19:15 | 19:30 | 57 | 0 | 0 | 0 | 0 | 57 | 57 | |
| 7:30 | 7:45 | 103 | 0 | 4 | 0 | 0 | 113 | 107 | 107 | 19:30 | 19:45 | 51 | 0 | 0 | 0 | 0 | 51 | 51 | |
| 7:45 | 8:00 | 93 | 0 | 0 | 0 | 0 | 93 | 93 | 93 | 19:45 | 20:00 | 42 | 0 | 0 | 0 | 0 | 42 | 42 | |
| 8:00 | 8:15 | 94 | 0 | 0 | 0 | 0 | 94 | 94 | 94 | 20:00 | 20:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 | 8:30 | 74 | 0 | 2 | 0 | 0 | 79 | 76 | 76 | 20:15 | 20:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 | 8:45 | 79 | 0 | 2 | 0 | 0 | 84 | 81 | 81 | 20:30 | 20:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 | 9:00 | 80 | 0 | 3 | 0 | 0 | 88 | 83 | 83 | 20:45 | 21:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:00 | 9:15 | 85 | 0 | 1 | 2 | 0 | 92 | 88 | 88 | 21:00 | 21:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:15 | 9:30 | 76 | 0 | 2 | 0 | 0 | 81 | 78 | 78 | 21:15 | 21:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:30 | 9:45 | 65 | 0 | 3 | 0 | 0 | 73 | 68 | 68 | 21:30 | 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9:45 | 10:00 | 67 | 0 | 2 | 1 | 0 | 74 | 70 | 70 | 21:45 | 22:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:00 | 10:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:00 | 22:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:15 | 10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:15 | 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:30 | 10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:30 | 22:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 10:45 | 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22:45 | 23:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:00 | 11:15 | 49 | 0 | 0 | 0 | 0 | 49 | 49 | 49 | 23:00 | 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:15 | 11:30 | 53 | 0 | 1 | 0 | 0 | 56 | 54 | 54 | 23:15 | 23:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:30 | 11:45 | 63 | 0 | 0 | 0 | 0 | 63 | 63 | 63 | 23:30 | 23:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11:45 | 12:00 | 67 | 0 | 2 | 0 | 0 | 72 | 69 | 69 | 23:45 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 678 | 246 | 583 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.894 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3059 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3059 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 106.2 | | 108.9 | | | 108.1 |
| Travel Time (s) | 7.6 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 737 | 267 | 634 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 737 | 901 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 56.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 173 | 356 | 16 | 92 | 331 | 10 | 9 | 29 | 7 | 6 | 47 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.995 | | | 0.982 | | | 0.927 | |
| Flt Protected | | 0.985 | | | 0.988 | | | 0.985 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3152 | 0 | 0 | 3240 | 0 | 0 | 3107 | 0 | 0 | 3039 | 0 |
| Flt Permitted | | 0.985 | | | 0.988 | | | 0.819 | | | 0.919 | |
| Satd. Flow (perm) | 0 | 3152 | 0 | 0 | 3240 | 0 | 0 | 2583 | 0 | 0 | 2804 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 81.4 | | | 90.4 | | | 86.2 | | | 101.3 | |
| Travel Time (s) | | 5.9 | | | 6.5 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.91 | 0.90 | 0.58 | 0.78 | 0.89 | 0.63 | 0.29 | 0.52 | 0.58 | 0.44 | 0.71 | 0.75 |
| Heavy Vehicles (%) | 2% | 5% | 14% | 3% | 2% | 0% | 12% | 0% | 0% | 14% | 0% | 0% |
| Adj. Flow (vph) | 190 | 396 | 28 | 118 | 372 | 16 | 31 | 56 | 12 | 14 | 66 | 75 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 614 | 0 | 0 | 506 | 0 | 0 | 99 | 0 | 0 | 155 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 22.0 | 22.0 | | 20.0 | 20.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 40.0% | 40.0% | | 36.4% | 36.4% | | 23.6% | 23.6% | | 23.6% | 23.6% | |
| Maximum Green (s) | 16.0 | 16.0 | | 14.0 | 14.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | 14.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.25 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 0.67 | | | 0.61 | | | 0.26 | | | 0.38 | |
| Control Delay | | 21.5 | | | 21.9 | | | 23.0 | | | 24.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 21.5 | | | 21.9 | | | 23.0 | | | 24.3 | |
| LOS | | C | | | C | | | C | | | C | |
| Approach Delay | | 21.5 | | | 21.9 | | | 23.0 | | | 24.3 | |
| Approach LOS | | C | | | C | | | C | | | C | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Stops (vph) | | 458 | | | 364 | | | 38 | | | 94 | |
| Fuel Used(l) | | 29 | | | 30 | | | 2 | | | 5 | |
| CO Emissions (g/hr) | | 540 | | | 566 | | | 38 | | | 97 | |
| NOx Emissions (g/hr) | | 104 | | | 109 | | | 7 | | | 19 | |
| VOC Emissions (g/hr) | | 124 | | | 131 | | | 9 | | | 22 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 29.4 | | | 24.5 | | | 4.9 | | | 7.8 | |
| Queue Length 95th (m) | | 45.0 | | | 37.6 | | | 6.0 | | | 11.8 | |
| Internal Link Dist (m) | | 57.4 | | | 66.4 | | | 62.2 | | | 77.3 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 916 | | | 824 | | | 375 | | | 407 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.67 | | | 0.61 | | | 0.26 | | | 0.38 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 55 |
| Offset: | 22 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 22.1 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 48.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1320 | 75 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.992 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4876 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4876 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 144.0 | | | 138.5 | 280.8 | |
| Travel Time (s) | 10.4 | | | 10.0 | 20.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1435 | 82 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1517 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 355 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 382 | 846 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.971 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.985 | |
| Satd. Flow (prot) | 0 | 3335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4828 | 0 |
| Flt Permitted | | | | | | | | | | | 0.985 | |
| Satd. Flow (perm) | 0 | 3335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4828 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 49.7 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.6 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.78 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.94 | 0.91 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 382 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 406 | 930 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 473 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1336 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 24.0 | | | | | | | | 53.0 | 53.0 | |
| Total Split (%) | | 31.2% | | | | | | | | 68.8% | 68.8% | |
| Maximum Green (s) | | 17.0 | | | | | | | | 48.0 | 48.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 17.0 | | | | | | | | | 48.0 | |
| Actuated g/C Ratio | | 0.22 | | | | | | | | | 0.62 | |
| v/c Ratio | | 0.64 | | | | | | | | | 0.44 | |
| Control Delay | | 31.9 | | | | | | | | | 8.1 | |
| Queue Delay | | 0.0 | | | | | | | | | 49.7 | |
| Total Delay | | 31.9 | | | | | | | | | 57.9 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 31.9 | | | | | | | | | 57.9 | |
| Approach LOS | | C | | | | | | | | | E | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019

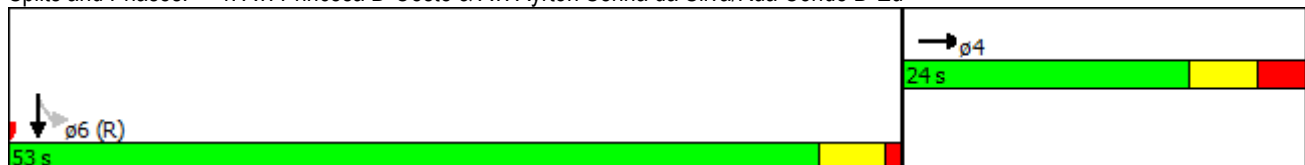


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| Stops (vph) | | 375 | | | | | | | | | 584 | |
| Fuel Used(l) | | 21 | | | | | | | | | 26 | |
| CO Emissions (g/hr) | | 388 | | | | | | | | | 484 | |
| NOx Emissions (g/hr) | | 75 | | | | | | | | | 93 | |
| VOC Emissions (g/hr) | | 90 | | | | | | | | | 112 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | 0 | |
| Queue Length 50th (m) | | 34.8 | | | | | | | | | 34.5 | |
| Queue Length 95th (m) | | 50.6 | | | | | | | | | 43.6 | |
| Internal Link Dist (m) | | 25.7 | | | 7.7 | | | 0.1 | | | 21.2 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 736 | | | | | | | | | 3009 | |
| Starvation Cap Reductn | | 0 | | | | | | | | | 1912 | |
| Spillback Cap Reductn | | 0 | | | | | | | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.64 | | | | | | | | | 1.22 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 77 |
| Actuated Cycle Length: | 77 |
| Offset: | 58 (75%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.64 |
| Intersection Signal Delay: | 51.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 46.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1228 | 675 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 15% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.946 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4650 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4650 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 60.8 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.4 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.90 | 0.88 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1364 | 767 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2131 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.15 | 1.15 | 1.15 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 24.0 | | | | | | | | | 46.0 | |
| Total Split (%) | | 34.3% | | | | | | | | | 65.7% | |
| Maximum Green (s) | | 17.0 | | | | | | | | | 41.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 17.0 | | | | | | | | | 41.0 | |
| Actuated g/C Ratio | | 0.24 | | | | | | | | | 0.59 | |
| v/c Ratio | | 0.53 | | | | | | | | | 0.78 | |
| Control Delay | | 26.0 | | | | | | | | | 13.7 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.5 | |
| Total Delay | | 26.0 | | | | | | | | | 61.2 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 26.0 | | | | | | | | | 61.2 | |
| Approach LOS | | C | | | | | | | | | E | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| Stops (vph) | | 318 | | | | | | | | | | 1351 |
| Fuel Used(l) | | 17 | | | | | | | | | | 63 |
| CO Emissions (g/hr) | | 314 | | | | | | | | | | 1167 |
| NOx Emissions (g/hr) | | 61 | | | | | | | | | | 225 |
| VOC Emissions (g/hr) | | 73 | | | | | | | | | | 269 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 25.4 | | | | | | | | | | 73.8 |
| Queue Length 95th (m) | | 38.8 | | | | | | | | | | 93.5 |
| Internal Link Dist (m) | | 36.8 | | | 12.6 | | | 21.2 | | | | 44.4 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 761 | | | | | | | | | | 2723 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 998 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.53 | | | | | | | | | | 1.24 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.78 |
| Intersection Signal Delay: | 55.6 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 59.3% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 181 | 1311 | 9 | 270 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 0% |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.998 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1513 | 4907 | 0 | 3355 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1513 | 4907 | 0 | 3355 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 138.5 | | 31.2 |
| Travel Time (s) | | 10.0 | | 2.2 |
| Peak Hour Factor | 0.66 | 0.91 | 0.45 | 0.89 |
| Heavy Vehicles (%) | 5% | 2% | 0% | 4% |
| Adj. Flow (vph) | 274 | 1441 | 20 | 303 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 274 | 1461 | 0 | 303 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 39.0 | | 31.0 |
| Total Split (%) | | 55.7% | | 44.3% |
| Maximum Green (s) | | 34.0 | | 26.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 70.0 | 34.0 | | 26.0 |
| Actuated g/C Ratio | 1.00 | 0.49 | | 0.37 |
| v/c Ratio | 0.18 | 0.61 | | 0.24 |
| Control Delay | 0.3 | 14.6 | | 15.9 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.3 | 14.6 | | 15.9 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | B | | B |
| Approach Delay | | 14.6 | | 15.9 |
| Approach LOS | | B | | B |
| Stops (vph) | 0 | 903 | | 177 |
| Fuel Used(l) | 1 | 52 | | 8 |
| CO Emissions (g/hr) | 12 | 975 | | 150 |
| NOx Emissions (g/hr) | 2 | 188 | | 29 |
| VOC Emissions (g/hr) | 3 | 225 | | 35 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 50.8 | | 14.7 |
| Queue Length 95th (m) | 0.0 | 64.7 | | 23.2 |
| Internal Link Dist (m) | | 114.5 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1513 | 2383 | | 1246 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.18 | 0.61 | | 0.24 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.61 |
| Intersection Signal Delay: | 12.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 41.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

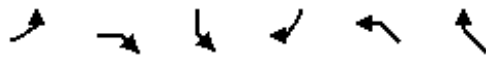
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1139 | 0 | 0 | 0 | 0 | 1580 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 3% | | 3% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3286 | 0 | 0 | 0 | 0 | 3437 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3286 | 0 | 0 | 0 | 0 | 3437 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 277.7 | |
| Travel Time (s) | 1.7 | | 4.8 | | 20.0 | |
| Peak Hour Factor | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 | 0.90 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1499 | 0 | 0 | 0 | 0 | 1756 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1499 | 0 | 0 | 0 | 0 | 1756 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 58.0 | | | | | 30.0 |
| Total Split (%) | 65.9% | | | | | 34.1% |
| Maximum Green (s) | 52.0 | | | | | 24.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 52.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.59 | | | | | 0.27 |
| v/c Ratio | 0.77 | | | | | 1.87 |
| Control Delay | 17.0 | | | | | 421.4 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 17.0 | | | | | 421.4 |
| LOS | B | | | | | F |
| Approach Delay | 17.0 | | | | | |
| Approach LOS | B | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|------|-----|------|-----|-------|--------|
| Stops (vph) | 815 | | | | | 1134 |
| Fuel Used(l) | 36 | | | | | 605 |
| CO Emissions (g/hr) | 665 | | | | | 11259 |
| NOx Emissions (g/hr) | 128 | | | | | 2173 |
| VOC Emissions (g/hr) | 153 | | | | | 2597 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 94.6 | | | | | ~210.9 |
| Queue Length 95th (m) | 89.0 | | | | | #247.1 |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 253.7 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1941 | | | | | 937 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.77 | | | | | 1.87 |

Intersection Summary

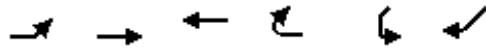
Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 88
 Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
 Natural Cycle: 140
 Control Type: Pretimed
 Maximum v/c Ratio: 1.87
 Intersection Signal Delay: 235.2
 Intersection LOS: F
 Intersection Capacity Utilization 79.3%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 379 | 426 | 0 | 0 | 0 | 675 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1643 | 1747 | 0 | 0 | 0 | 2694 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1643 | 1747 | 0 | 0 | 0 | 2694 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 49.7 | | 60.8 | |
| Travel Time (s) | | 6.6 | 3.6 | | 4.4 | |
| Peak Hour Factor | 0.94 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 403 | 458 | 0 | 0 | 0 | 767 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 403 | 458 | 0 | 0 | 0 | 767 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 26.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 121 | 139 | 9 | 53 | 170 | 27 | 3 | 110 | 113 | 22 | 150 | 200 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.993 | | | 0.987 | | | 0.937 | | | 0.929 | |
| Flt Protected | | 0.976 | | | 0.987 | | | 0.998 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 1921 | 0 | 0 | 1924 | 0 | 0 | 1917 | 0 | 0 | 1883 | 0 |
| Flt Permitted | | 0.976 | | | 0.987 | | | 0.998 | | | 0.996 | |
| Satd. Flow (perm) | 0 | 1921 | 0 | 0 | 1924 | 0 | 0 | 1917 | 0 | 0 | 1883 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 273.5 | | | 183.6 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 19.7 | | | 13.2 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.73 | 0.89 | 0.50 | 0.63 | 0.81 | 0.84 | 0.25 | 0.79 | 0.85 | 0.66 | 0.84 | 0.86 |
| Heavy Vehicles (%) | 1% | 1% | 12% | 0% | 3% | 0% | 0% | 0% | 4% | 5% | 3% | 2% |
| Adj. Flow (vph) | 166 | 156 | 18 | 84 | 210 | 32 | 12 | 139 | 133 | 33 | 179 | 233 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 340 | 0 | 0 | 326 | 0 | 0 | 284 | 0 | 0 | 445 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 69.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 303 | 558 | 422 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 5% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.934 | |
| Flt Protected | | | | | 0.973 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1780 | 3092 | 0 |
| Flt Permitted | | | | | 0.973 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1780 | 3092 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 31.3 | | 188.5 | | 38.2 | |
| Travel Time (s) | 2.3 | | 13.6 | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.87 | 0.84 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 3% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 329 | 641 | 502 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 329 | 1143 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.08 | 1.08 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 32.6% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 271 | 1509 | 51 | 1154 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.994 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3319 | 4813 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3319 | 4813 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 196.7 | | 63.1 |
| Travel Time (s) | | 14.2 | | 4.5 |
| Peak Hour Factor | 0.79 | 0.92 | 0.81 | 0.93 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 343 | 1640 | 63 | 1241 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 343 | 1703 | 0 | 1241 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 47.0 | 38.0 | | 41.0 |
| Total Split (%) | 55.3% | 44.7% | | 48.2% |
| Maximum Green (s) | 43.0 | 32.0 | | 36.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 43.0 | 32.0 | | 42.0 |
| Actuated g/C Ratio | 0.51 | 0.38 | | 0.49 |
| v/c Ratio | 0.20 | 0.94 | | 0.53 |
| Control Delay | 12.0 | 37.5 | | 15.8 |
| Queue Delay | 60.9 | 0.0 | | 49.9 |
| Total Delay | 72.8 | 37.5 | | 65.7 |
| LOS | E | D | | E |
| Approach Delay | | 37.5 | | 65.7 |
| Approach LOS | | D | | E |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

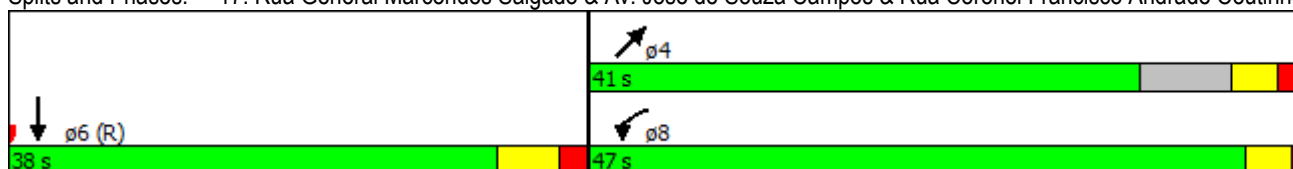


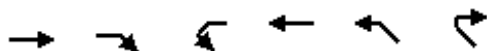
| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|--------|------|------|
| Stops (vph) | 141 | 1375 | | 749 |
| Fuel Used(l) | 7 | 105 | | 38 |
| CO Emissions (g/hr) | 121 | 1953 | | 702 |
| NOx Emissions (g/hr) | 23 | 377 | | 136 |
| VOC Emissions (g/hr) | 28 | 450 | | 162 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 15.7 | 100.9 | | 50.7 |
| Queue Length 95th (m) | 20.2 | #135.2 | | 63.5 |
| Internal Link Dist (m) | | 172.7 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1679 | 1811 | | 2330 |
| Starvation Cap Reductn | 1404 | 0 | | 1303 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.25 | 0.94 | | 1.21 |

Intersection Summary

Area Type: Other
 Cycle Length: 85
 Actuated Cycle Length: 85
 Offset: 29 (34%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 51.9
 Intersection LOS: D
 Intersection Capacity Utilization 72.8%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho





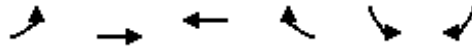
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 634 | 284 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.954 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3201 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3201 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 31.3 | | | 25.9 | 52.3 | |
| Travel Time (s) | 2.3 | | | 1.9 | 3.8 | |
| Peak Hour Factor | 0.87 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 4% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 729 | 323 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1052 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.85 | 0.85 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.9% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 51 | 181 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1711 | 1749 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1711 | 1749 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.68 | 0.66 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 75 | 274 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 75 | 274 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 25.6% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 270 | 51 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 6% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2642 | 1659 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2642 | 1659 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.89 | 0.68 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 303 | 75 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 303 | 75 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.09 | 1.09 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 25.6% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↕↕ | | | | | | ↕↕↕ | | | | |
| Volume (vph) | 83 | 654 | 0 | 0 | 0 | 0 | 0 | 619 | 175 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frts | | | | | | | | 0.961 | | | | |
| Flt Protected | | 0.994 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3376 | 0 | 0 | 0 | 0 | 0 | 4467 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.994 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3376 | 0 | 0 | 0 | 0 | 0 | 4467 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.81 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.87 | 0.71 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 102 | 696 | 0 | 0 | 0 | 0 | 0 | 711 | 246 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 798 | 0 | 0 | 0 | 0 | 0 | 957 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 54.0 | 54.0 | | | | | | 24.0 | | | | |
| Total Split (%) | 69.2% | 69.2% | | | | | | 30.8% | | | | |
| Maximum Green (s) | 47.0 | 47.0 | | | | | | 19.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 47.0 | | | | | | 19.0 | | | | |
| Actuated g/C Ratio | | 0.60 | | | | | | 0.24 | | | | |
| v/c Ratio | | 0.39 | | | | | | 0.88 | | | | |
| Control Delay | | 8.8 | | | | | | 39.5 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 8.8 | | | | | | 39.5 | | | | |
| LOS | | A | | | | | | D | | | | |
| Approach Delay | | 8.8 | | | | | | 39.5 | | | | |
| Approach LOS | | A | | | | | | D | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|------|-----|-----|-------|-----|-----|------|-----|
| Stops (vph) | | 353 | | | | | | 710 | | | | |
| Fuel Used(l) | | 15 | | | | | | 42 | | | | |
| CO Emissions (g/hr) | | 281 | | | | | | 782 | | | | |
| NOx Emissions (g/hr) | | 54 | | | | | | 151 | | | | |
| VOC Emissions (g/hr) | | 65 | | | | | | 180 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | 30.5 | | | | | | 52.5 | | | | |
| Queue Length 95th (m) | | 41.8 | | | | | | #71.1 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2034 | | | | | | 1088 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 0.39 | | | | | | 0.88 | | | | |

Intersection Summary

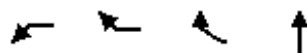
Area Type: Other
 Cycle Length: 78
 Actuated Cycle Length: 78
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 25.5
 Intersection LOS: C
 Intersection Capacity Utilization 46.4%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

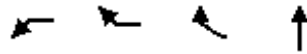


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 411 | 270 | 243 | 1081 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.948 | 0.850 | | |
| Flt Protected | 0.968 | | | |
| Satd. Flow (prot) | 3204 | 1360 | 0 | 4821 |
| Flt Permitted | 0.968 | | | |
| Satd. Flow (perm) | 3204 | 1360 | 0 | 4821 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.91 | 0.89 | 0.94 | 0.88 |
| Heavy Vehicles (%) | 1% | 4% | 3% | 4% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 452 | 303 | 259 | 1228 |
| Shared Lane Traffic (%) | | 79% | | |
| Lane Group Flow (vph) | 691 | 323 | 0 | 1228 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 47.0 | 47.0 | | 26.0 |
| Total Split (%) | 64.4% | 64.4% | | 35.6% |
| Maximum Green (s) | 42.0 | 42.0 | | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 42.0 | 42.0 | | 21.0 |
| Actuated g/C Ratio | 0.58 | 0.58 | | 0.29 |
| v/c Ratio | 0.37 | 0.41 | | 0.89 |
| Control Delay | 9.1 | 10.7 | | 34.4 |
| Queue Delay | 0.0 | 0.0 | | 47.9 |
| Total Delay | 9.1 | 10.7 | | 82.2 |
| LOS | A | B | | F |
| Approach Delay | 9.6 | | | 82.2 |
| Approach LOS | A | | | F |



| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|-------|
| Stops (vph) | 312 | 159 | | 956 |
| Fuel Used(l) | 18 | 9 | | 57 |
| CO Emissions (g/hr) | 331 | 169 | | 1061 |
| NOx Emissions (g/hr) | 64 | 33 | | 205 |
| VOC Emissions (g/hr) | 76 | 39 | | 245 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 25.3 | 25.9 | | 61.7 |
| Queue Length 95th (m) | 35.6 | 44.2 | | #83.5 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1843 | 782 | | 1386 |
| Starvation Cap Reductn | 0 | 0 | | 468 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.37 | 0.41 | | 1.34 |

Intersection Summary

Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 73
 Offset: 2 (3%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 49.4
 Intersection LOS: D
 Intersection Capacity Utilization 52.6%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1139 | 1395 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 3% | | | 3% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3237 | 4795 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3237 | 4795 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 280.8 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.2 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.73 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 3% | 3% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1499 | 1911 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1499 | 1911 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 76.0 | 76.0 | 8.0 |
| Total Split (%) | | | | | 90.5% | 90.5% | 10% |
| Maximum Green (s) | | | | | 70.0 | 70.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 70.0 | 70.0 | |
| Actuated g/C Ratio | | | | | 0.83 | 0.83 | |
| v/c Ratio | | | | | 0.56 | 0.48 | |
| Control Delay | | | | | 3.1 | 2.4 | |
| Queue Delay | | | | | 2.9 | 1.4 | |
| Total Delay | | | | | 6.0 | 3.8 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 4.8 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 291 | 312 | |
| Fuel Used(l) | | | | | 18 | 20 | |
| CO Emissions (g/hr) | | | | | 337 | 380 | |
| NOx Emissions (g/hr) | | | | | 65 | 73 | |
| VOC Emissions (g/hr) | | | | | 78 | 88 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 25.6 | 20.7 | |
| Queue Length 95th (m) | | | | | 24.4 | 17.7 | |
| Internal Link Dist (m) | 0.1 | | 256.8 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2697 | 3995 | |
| Starvation Cap Reductn | | | | | 1055 | 1781 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.91 | 0.86 | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 84 |
| Actuated Cycle Length: | 84 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.56 |
| Intersection Signal Delay: | 4.8 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 51.7% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 1695 | 0 | 0 | 1217 | 250 | 241 | 434 | 99 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | 0.974 | | | 0.997 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4586 | 0 | 1711 | 1709 | 1373 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4586 | 0 | 1711 | 1709 | 1373 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 60.8 | | | 197.5 | | | 40.5 | | 59.4 | |
| Travel Time (s) | | 4.4 | | | 14.2 | | | 2.9 | | 4.3 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.92 | 0.92 | 0.86 | 0.83 | 0.86 | 0.67 | 0.83 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 8% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1823 | 0 | 0 | 1415 | 301 | 280 | 648 | 119 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 1823 | 0 | 0 | 1716 | 0 | 280 | 660 | 107 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 22.0 | | | 21.0 | | 27.0 | 27.0 | 27.0 | | |
| Total Split (s) | | 59.0 | | | 54.0 | | 32.0 | 32.0 | 32.0 | | |
| Total Split (%) | | 64.8% | | | 59.3% | | 35.2% | 35.2% | 35.2% | | |
| Maximum Green (s) | | 54.0 | | | 50.0 | | 27.0 | 27.0 | 27.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 54.0 | | | 55.0 | | 27.0 | 27.0 | 27.0 | | |
| Actuated g/C Ratio | | 0.59 | | | 0.60 | | 0.30 | 0.30 | 0.30 | | |
| v/c Ratio | | 0.65 | | | 0.62 | | 0.55 | 1.30 | 0.26 | | |
| Control Delay | | 4.5 | | | 12.6 | | 32.8 | 176.4 | 28.2 | | |
| Queue Delay | | 3.1 | | | 0.0 | | 67.2 | 6.3 | 36.1 | | |
| Total Delay | | 7.6 | | | 12.6 | | 100.0 | 182.7 | 64.3 | | |
| LOS | | A | | | B | | F | F | E | | |
| Approach Delay | | 7.6 | | | 12.6 | | | 148.5 | | | |
| Approach LOS | | A | | | B | | | F | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

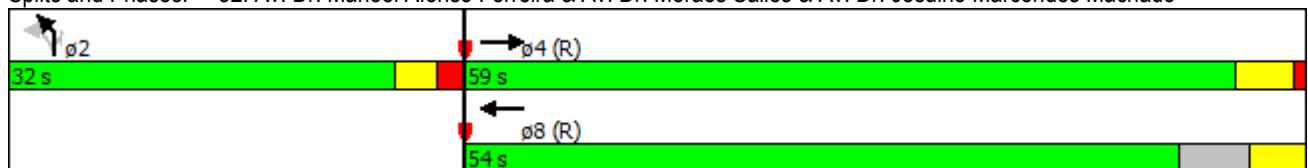


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|------|-----|-----|-------|-----|---------|--------|-------|------|-----|
| Stops (vph) | | 417 | | | 868 | | 213 | 357 | 76 | | |
| Fuel Used(l) | | 25 | | | 61 | | 12 | 70 | 4 | | |
| CO Emissions (g/hr) | | 466 | | | 1139 | | 219 | 1302 | 74 | | |
| NOx Emissions (g/hr) | | 90 | | | 220 | | 42 | 251 | 14 | | |
| VOC Emissions (g/hr) | | 107 | | | 263 | | 51 | 300 | 17 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | 19.4 | | | 67.1 | | 47.6 | ~160.4 | 18.5 | | |
| Queue Length 95th (m) | | 24.9 | | | 75.4 | | m52.9m# | 125.5 | m23.3 | | |
| Internal Link Dist (m) | | 36.8 | | | 173.5 | | | 16.5 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2802 | | | 2771 | | 507 | 507 | 407 | | |
| Starvation Cap Reductn | | 848 | | | 0 | | 341 | 233 | 295 | | |
| Spillback Cap Reductn | | 0 | | | 61 | | 0 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 0.93 | | | 0.63 | | 1.69 | 2.41 | 0.96 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 91
 Actuated Cycle Length: 91
 Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 1.30
 Intersection Signal Delay: 41.7 Intersection LOS: D
 Intersection Capacity Utilization 129.8% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↑↕ | |
| Volume (vph) | 366 | 215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 407 | 66 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 6% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.970 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2591 | 0 |
| Flt Permitted | | 0.970 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2591 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 25.9 | | | 73.4 | | 40.5 | | 125.7 | | |
| Travel Time (s) | | 1.9 | | | 5.3 | | 2.9 | | 9.1 | | |
| Peak Hour Factor | 0.94 | 0.88 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.92 |
| Heavy Vehicles (%) | 3% | 2% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% |
| Adj. Flow (vph) | 389 | 244 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 536 | 72 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 633 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 608 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | | | 21.0 | |
| Total Split (s) | 69.0 | 69.0 | | | | | | | | 22.0 | |
| Total Split (%) | 75.8% | 75.8% | | | | | | | | 24.2% | |
| Maximum Green (s) | 64.0 | 64.0 | | | | | | | | 17.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | | | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 64.0 | | | | | | | | 17.0 | |
| Actuated g/C Ratio | | 0.70 | | | | | | | | 0.19 | |
| v/c Ratio | | 0.27 | | | | | | | | 1.26 | |
| Control Delay | | 5.1 | | | | | | | | 164.8 | |
| Queue Delay | | 0.0 | | | | | | | | 3.9 | |
| Total Delay | | 5.1 | | | | | | | | 168.7 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 5.1 | | | | | | | | | |
| Approach LOS | | A | | | | | | | | | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

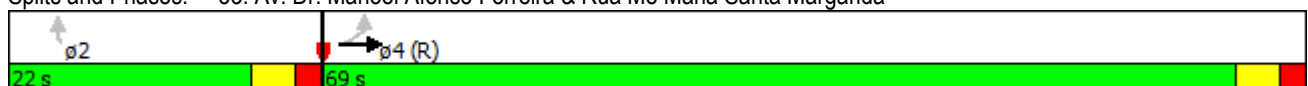


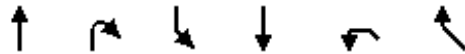
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|------------------------|-----|-------|-----|-----|------|-----|------|-----|-------|-------|------|
| Stops (vph) | | 170 | | | | | | | | 380 | |
| Fuel Used(l) | | 7 | | | | | | | | 74 | |
| CO Emissions (g/hr) | | 139 | | | | | | | | 1382 | |
| NOx Emissions (g/hr) | | 27 | | | | | | | | 267 | |
| VOC Emissions (g/hr) | | 32 | | | | | | | | 319 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | |
| Queue Length 50th (m) | | 17.7 | | | | | | | | ~80.4 | |
| Queue Length 95th (m) | | m23.6 | | | | | | | | #91.0 | |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | 16.5 | | 101.7 | | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2320 | | | | | | | | 484 | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | |
| Spillback Cap Reductn | | 262 | | | | | | | | 158 | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.31 | | | | | | | | 1.87 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 91 |
| Actuated Cycle Length: | 91 |
| Offset: | 42 (46%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.26 |
| Intersection Signal Delay: | 85.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 45.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |
| m | Volume for 95th percentile queue is metered by upstream signal. |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida





| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 863 | 0 | 684 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3353 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3353 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.6 | | | 217.3 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.6 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 0 | 938 | 0 | 743 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 938 | 0 | 743 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

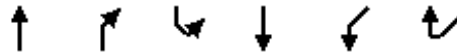
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

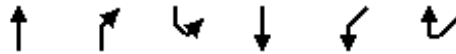


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑↑ | | | | | | |
| Volume (vph) | 1288 | 1431 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 3% | | | 3% | 3% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.917 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4440 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4440 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.89 | 0.79 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 1447 | 1811 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3258 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.86 | 0.86 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 76.0 | | | | | | 8.0 |
| Total Split (%) | 90.5% | | | | | | 10% |
| Maximum Green (s) | 70.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 70.0 | | | | | | |
| Actuated g/C Ratio | 0.83 | | | | | | |
| v/c Ratio | 1.42dr | | | | | | |
| Control Delay | 8.3 | | | | | | |
| Queue Delay | 40.4 | | | | | | |
| Total Delay | 48.8 | | | | | | |
| LOS | D | | | | | | |
| Approach Delay | 48.8 | | | | | | |
| Approach LOS | D | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|-----|------|------|-----|-----|
| Stops (vph) | 1489 | | | | | | |
| Fuel Used(l) | 68 | | | | | | |
| CO Emissions (g/hr) | 1267 | | | | | | |
| NOx Emissions (g/hr) | 244 | | | | | | |
| VOC Emissions (g/hr) | 292 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 80.2 | | | | | | |
| Queue Length 95th (m) | 101.1 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 3700 | | | | | | |
| Starvation Cap Reductn | 704 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.09 | | | | | | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 84 |
| Actuated Cycle Length: | 84 |
| Offset: | 32 (38%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.88 |
| Intersection Signal Delay: | 48.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 62.0% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 271 | 227 | 0 | 1288 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 3% | | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.972 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3126 | 1346 | 0 | 4842 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3126 | 1346 | 0 | 4842 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.79 | 0.86 | 0.92 | 0.89 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 343 | 264 | 0 | 1447 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 30% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 422 | 185 | 0 | 1447 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (%) | | | | | 40.5% | 40.5% | 59.5% | 59.5% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 16.0 | 16.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 16.0 | | | | |
| Actuated g/C Ratio | | | | | 0.27 | 0.27 | | 0.43 | | | | |
| v/c Ratio | | | | | 0.50 | 0.51 | | 0.69 | | | | |
| Control Delay | | | | | 13.8 | 17.2 | | 10.6 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 9.0 | | | | |
| Total Delay | | | | | 13.8 | 17.2 | | 19.7 | | | | |
| LOS | | | | | B | B | | B | | | | |
| Approach Delay | | | | | 14.9 | | | 19.7 | | | | |
| Approach LOS | | | | | B | | | B | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|-----|
| Stops (vph) | | | | | 263 | 130 | | 928 | | | | |
| Fuel Used(l) | | | | | 12 | 6 | | 39 | | | | |
| CO Emissions (g/hr) | | | | | 219 | 113 | | 727 | | | | |
| NOx Emissions (g/hr) | | | | | 42 | 22 | | 140 | | | | |
| VOC Emissions (g/hr) | | | | | 50 | 26 | | 168 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 12.5 | 11.0 | | 25.2 | | | | |
| Queue Length 95th (m) | | | | | 18.5 | 23.4 | | 35.5 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 844 | 363 | | 2093 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 622 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.50 | 0.51 | | 0.98 | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 37 |
| Actuated Cycle Length: | 37 |
| Offset: | 0 (0%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 18.2 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 62.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 197 | 441 | 562 | 957 | 629 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.940 | |
| Flt Protected | 0.950 | 0.993 | 0.950 | | |
| Satd. Flow (prot) | 1588 | 3264 | 1641 | 4416 | 0 |
| Flt Permitted | 0.950 | 0.993 | 0.950 | | |
| Satd. Flow (perm) | 1588 | 3264 | 1641 | 4416 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 209.4 | |
| Travel Time (s) | | 2.4 | | 15.1 | |
| Peak Hour Factor | 0.55 | 0.91 | 0.95 | 0.93 | 0.92 |
| Heavy Vehicles (%) | 0% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 358 | 485 | 592 | 1029 | 684 |
| Shared Lane Traffic (%) | 24% | | | | |
| Lane Group Flow (vph) | 272 | 571 | 592 | 1713 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 42.0 | 42.0 | 68.0 | 68.0 | |
| Total Split (%) | 38.2% | 38.2% | 61.8% | 61.8% | |
| Maximum Green (s) | 38.0 | 38.0 | 64.0 | 64.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 38.0 | 38.0 | 64.0 | 64.0 | |
| Actuated g/C Ratio | 0.35 | 0.35 | 0.58 | 0.58 | |
| v/c Ratio | 0.50 | 0.51 | 0.62 | 0.67 | |
| Control Delay | 32.3 | 30.5 | 18.6 | 17.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 32.3 | 30.5 | 18.6 | 17.3 | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|-------|-------|-----|
| LOS | C | C | B | B | |
| Approach Delay | | 31.1 | | 17.7 | |
| Approach LOS | | C | | B | |
| Stops (vph) | 116 | 377 | 359 | 1030 | |
| Fuel Used(l) | 7 | 21 | 27 | 76 | |
| CO Emissions (g/hr) | 126 | 399 | 508 | 1410 | |
| NOx Emissions (g/hr) | 24 | 77 | 98 | 272 | |
| VOC Emissions (g/hr) | 29 | 92 | 117 | 325 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 52.9 | 55.7 | 82.4 | 91.1 | |
| Queue Length 95th (m) | 44.5 | 73.9 | 119.5 | 107.8 | |
| Internal Link Dist (m) | | 9.3 | | 185.4 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 548 | 1127 | 954 | 2569 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.50 | 0.51 | 0.62 | 0.67 | |

Intersection Summary

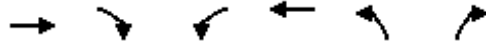
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 42 (38%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 21.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 51.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019



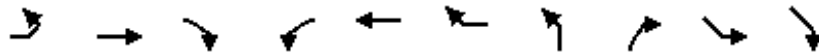
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↓ | | | | | |
| Volume (vph) | 1036 | 34 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.994 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4799 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4799 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1126 | 45 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1171 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.1% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Colombo



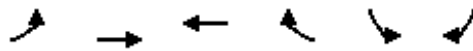
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↗ | ↘ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 4 | 47 | 562 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1801 | 1531 | 3351 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1801 | 1531 | 3351 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.81 | 0.95 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 4 | 58 | 592 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 4 | 58 | 592 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 35.6% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 634 | 0 | 0 | 4 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4916 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4916 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 697 | 0 | 0 | 4 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 697 | 0 | 0 | 4 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Yield | Yield | | Yield | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.6% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1036 | 0 | 0 | 1498 | 282 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.972 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3423 | 0 | 0 | 4698 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3423 | 0 | 0 | 4698 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.77 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1126 | 0 | 0 | 1628 | 366 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1126 | 0 | 0 | 1994 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 47.0 | | | 45.0 | | | |
| Total Split (%) | | 51.1% | | | 48.9% | | | |
| Maximum Green (s) | | 43.0 | | | 41.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 43.0 | | | 41.0 | | | |
| Actuated g/C Ratio | | 0.47 | | | 0.45 | | | |
| v/c Ratio | | 0.70 | | | 0.95 | | | |
| Control Delay | | 22.4 | | | 36.6 | | | |
| Queue Delay | | 0.0 | | | 45.2 | | | |
| Total Delay | | 22.4 | | | 81.8 | | | |
| LOS | | C | | | F | | | |
| Approach Delay | | | | | 81.8 | | | |
| Approach LOS | | | | | F | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

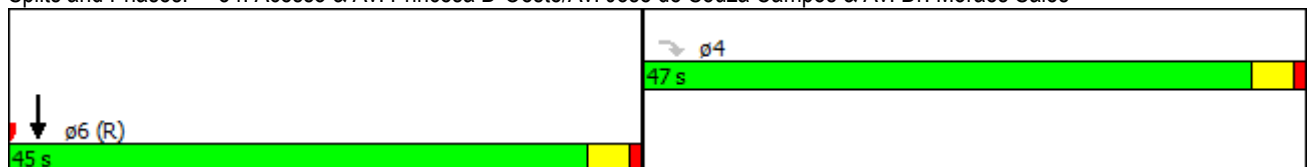


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|------|-----|------|--------|-----|------|-----|
| Stops (vph) | | 789 | | | 1556 | | | |
| Fuel Used(l) | | 40 | | | 95 | | | |
| CO Emissions (g/hr) | | 736 | | | 1766 | | | |
| NOx Emissions (g/hr) | | 142 | | | 341 | | | |
| VOC Emissions (g/hr) | | 170 | | | 407 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 70.3 | | | 127.0 | | | |
| Queue Length 95th (m) | | 90.6 | | | #166.5 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1599 | | | 2093 | | | |
| Starvation Cap Reductn | | 0 | | | 893 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.70 | | | 1.66 | | | |

Intersection Summary

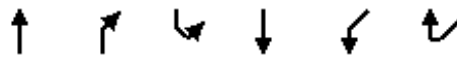
Area Type: Other
 Cycle Length: 92
 Actuated Cycle Length: 92
 Offset: 10 (11%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 60.4
 Intersection LOS: E
 Intersection Capacity Utilization 66.1%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 34 | 282 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1694 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1694 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.75 | 0.77 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 3% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 45 | 366 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 45 | 366 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 25.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 40 | 794 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4618 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4618 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 138.0 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.9 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.79 | 0.87 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 51 | 913 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 964 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 40.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 40 | 0 | 0 | 0 | 0 | 917 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 146.0 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.5 | | | 1.6 |
| Peak Hour Factor | 0.79 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 51 | 0 | 0 | 0 | 0 | 1008 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 51 | 0 | 0 | 0 | 0 | 1008 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 40.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 379 | 0 | 0 | 702 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3286 | 0 | 0 | 4868 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3286 | 0 | 0 | 4868 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.94 | 0.92 | 0.92 | 0.87 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 403 | 0 | 0 | 807 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 403 | 0 | 0 | 807 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 22.0 | | | 23.0 | | |
| Total Split (s) | 53.0 | | | 24.0 | | |
| Total Split (%) | 68.8% | | | 31.2% | | |
| Maximum Green (s) | 47.0 | | | 17.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 2.0 | | | 3.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 6.0 | | | 7.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 47.0 | | | 17.0 | | |
| Actuated g/C Ratio | 0.61 | | | 0.22 | | |
| v/c Ratio | 0.20 | | | 0.75 | | |
| Control Delay | 7.0 | | | 33.2 | | |
| Queue Delay | 57.7 | | | 31.0 | | |
| Total Delay | 64.7 | | | 64.1 | | |
| LOS | E | | | E | | |
| Approach Delay | 64.7 | | | 64.1 | | |
| Approach LOS | E | | | E | | |
| Stops (vph) | 153 | | | 632 | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | 7 | | | 37 | | |
| CO Emissions (g/hr) | 126 | | | 681 | | |
| NOx Emissions (g/hr) | 24 | | | 131 | | |
| VOC Emissions (g/hr) | 29 | | | 157 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 12.6 | | | 42.5 | | |
| Queue Length 95th (m) | 18.8 | | | 53.9 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2005 | | | 1074 | | |
| Starvation Cap Reductn | 1643 | | | 305 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 1.11 | | | 1.05 | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 77 |
| Actuated Cycle Length: | 77 |
| Offset: | 4 (5%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.75 |
| Intersection Signal Delay: | 64.3 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 86.4% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

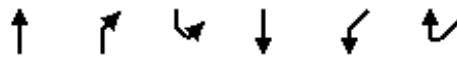
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



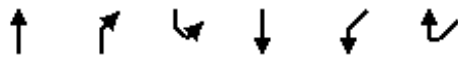
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1492 | 411 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.91 | 0.91 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1640 | 452 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1640 | 452 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 47.0 | 33.0 | |
| Total Split (%) | | | | 58.8% | 41.3% | |
| Maximum Green (s) | | | | 42.0 | 28.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 28.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.35 | |
| v/c Ratio | | | | 0.64 | 0.39 | |
| Control Delay | | | | 15.0 | 20.8 | |
| Queue Delay | | | | 49.9 | 0.0 | |
| Total Delay | | | | 64.9 | 20.8 | |
| LOS | | | | E | C | |
| Approach Delay | | | | 64.9 | 20.8 | |
| Approach LOS | | | | E | C | |
| Stops (vph) | | | | 999 | 296 | |

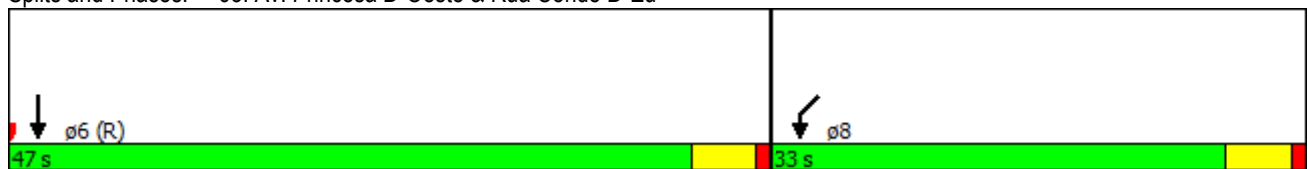


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | | | | 45 | 14 | |
| CO Emissions (g/hr) | | | | 841 | 268 | |
| NOx Emissions (g/hr) | | | | 162 | 52 | |
| VOC Emissions (g/hr) | | | | 194 | 62 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 64.1 | 27.5 | |
| Queue Length 95th (m) | | | | 79.1 | 39.9 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2580 | 1172 | |
| Starvation Cap Reductn | | | | 1572 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.63 | 0.39 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.64 |
| Intersection Signal Delay: | 55.3 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 48.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

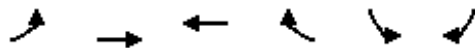
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 370 | 24 | 0 | 128 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.985 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3297 | 0 | 0 | 1558 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3297 | 0 | 0 | 1558 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.52 | 0.92 | 0.83 |
| Heavy Vehicles (%) | 2% | 2% | 3% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 402 | 46 | 0 | 154 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 448 | 0 | 0 | 154 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 25.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1154 | 0 | 0 | 0 | 0 | 1515 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 3% | 3% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3437 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3437 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.89 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1241 | 0 | 0 | 0 | 0 | 1702 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1241 | 0 | 0 | 0 | 0 | 1702 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 47.0 | | | | | 22.0 |
| Total Split (%) | 68.1% | | | | | 31.9% |
| Maximum Green (s) | 43.0 | | | | | 16.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 43.0 | | | | | 16.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.23 |
| v/c Ratio | 0.58 | | | | | 2.14 |
| Control Delay | 9.0 | | | | | 537.1 |
| Queue Delay | 50.1 | | | | | 3.3 |
| Total Delay | 59.1 | | | | | 540.4 |
| LOS | E | | | | | F |
| Approach Delay | 59.1 | | | | | |
| Approach LOS | E | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|------|-----|-----|------|------|--------|
| Stops (vph) | 620 | | | | | 1190 |
| Fuel Used(l) | 26 | | | | | 659 |
| CO Emissions (g/hr) | 490 | | | | | 12249 |
| NOx Emissions (g/hr) | 95 | | | | | 2364 |
| VOC Emissions (g/hr) | 113 | | | | | 2825 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 45.3 | | | | | ~165.3 |
| Queue Length 95th (m) | 61.7 | | | | | #196.8 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2153 | | | | | 796 |
| Starvation Cap Reductn | 1183 | | | | | 300 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.28 | | | | | 3.43 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 69 |
| Actuated Cycle Length: | 69 |
| Offset: | 5 (7%), Referenced to phase 4:NBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.14 |
| Intersection Signal Delay: | 337.5 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 75.6% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Moraes Machado

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1518 | 447 | 0 | 1458 | 0 | 177 | 533 | 153 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3134 | 1364 | 0 | 4868 | 0 | 0 | 3360 | 1516 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3134 | 1364 | 0 | 4868 | 0 | 0 | 3360 | 1516 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 144.4 | | | 60.8 | | | 63.6 | | 38.2 | |
| Travel Time (s) | | 10.4 | | | 4.4 | | | 4.6 | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.79 | 0.92 | 0.86 | 0.92 | 0.87 | 0.86 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 3% | 2% | 0% | 1% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1632 | 566 | 0 | 1695 | 0 | 203 | 620 | 166 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1689 | 509 | 0 | 1695 | 0 | 0 | 823 | 166 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 27.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 54.0 | 54.0 | | 59.0 | | 32.0 | 32.0 | 32.0 | | |
| Total Split (%) | | 59.3% | 59.3% | | 64.8% | | 35.2% | 35.2% | 35.2% | | |
| Maximum Green (s) | | 50.0 | 50.0 | | 54.0 | | 27.0 | 27.0 | 27.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 55.0 | 55.0 | | 54.0 | | 27.0 | 27.0 | 27.0 | | |
| Actuated g/C Ratio | | 0.60 | 0.60 | | 0.59 | | 0.30 | 0.30 | 0.30 | | |
| v/c Ratio | | 0.89 | 0.62 | | 0.59 | | 0.83 | 0.37 | 0.37 | | |
| Control Delay | | 23.2 | 15.5 | | 6.8 | | 38.3 | 28.2 | 28.2 | | |
| Queue Delay | | 0.6 | 0.0 | | 0.3 | | 0.0 | 0.0 | 0.0 | | |
| Total Delay | | 23.8 | 15.5 | | 7.1 | | 38.3 | 28.2 | 28.2 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

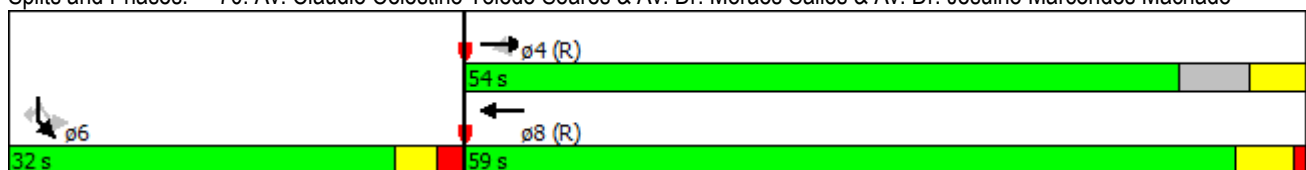


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|------|-----|------|-----|------|------|------|------|-----|
| LOS | | C | B | | A | | | D | C | | |
| Approach Delay | | 21.9 | | | 7.1 | | | 36.6 | | | |
| Approach LOS | | C | | | A | | | D | | | |
| Stops (vph) | | 1236 | 247 | | 443 | | | 630 | 119 | | |
| Fuel Used(l) | | 77 | 16 | | 26 | | | 39 | 7 | | |
| CO Emissions (g/hr) | | 1432 | 295 | | 483 | | | 731 | 129 | | |
| NOx Emissions (g/hr) | | 276 | 57 | | 93 | | | 141 | 25 | | |
| VOC Emissions (g/hr) | | 330 | 68 | | 111 | | | 169 | 30 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | 134.3 | 59.4 | | 29.2 | | | 72.4 | 24.0 | | |
| Queue Length 95th (m) | | #179.8 | 75.3 | | 31.5 | | | 89.7 | 42.2 | | |
| Internal Link Dist (m) | | 120.4 | | | 36.8 | | | 39.6 | | 14.2 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1894 | 824 | | 2888 | | | 996 | 449 | | |
| Starvation Cap Reductn | | 0 | 0 | | 537 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 45 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 0.91 | 0.62 | | 0.72 | | | 0.83 | 0.37 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 91
 Actuated Cycle Length: 91
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 19.7 Intersection LOS: B
 Intersection Capacity Utilization 129.8% ICU Level of Service H
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 678 | 246 | 583 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.894 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3059 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3059 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 106.2 | | 108.9 | | | 108.1 |
| Travel Time (s) | 7.6 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 833 | 302 | 716 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 833 | 1018 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 62.4% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 173 | 356 | 16 | 92 | 331 | 10 | 9 | 29 | 7 | 6 | 47 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.995 | | | 0.981 | | | 0.928 | |
| Flt Protected | | 0.985 | | | 0.988 | | | 0.985 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3153 | 0 | 0 | 3240 | 0 | 0 | 3104 | 0 | 0 | 3044 | 0 |
| Flt Permitted | | 0.985 | | | 0.988 | | | 0.814 | | | 0.919 | |
| Satd. Flow (perm) | 0 | 3153 | 0 | 0 | 3240 | 0 | 0 | 2565 | 0 | 0 | 2808 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 81.4 | | | 90.4 | | | 86.2 | | | 101.3 | |
| Travel Time (s) | | 5.9 | | | 6.5 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.91 | 0.90 | 0.58 | 0.78 | 0.89 | 0.63 | 0.29 | 0.52 | 0.58 | 0.44 | 0.71 | 0.75 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 5% | 14% | 3% | 2% | 0% | 12% | 0% | 0% | 14% | 0% | 0% |
| Adj. Flow (vph) | 215 | 447 | 31 | 133 | 420 | 18 | 35 | 63 | 14 | 15 | 75 | 84 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 693 | 0 | 0 | 571 | 0 | 0 | 112 | 0 | 0 | 174 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 22.0 | 22.0 | | 20.0 | 20.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 40.0% | 40.0% | | 36.4% | 36.4% | | 23.6% | 23.6% | | 23.6% | 23.6% | |
| Maximum Green (s) | 16.0 | 16.0 | | 14.0 | 14.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | 14.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.25 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 0.76 | | | 0.69 | | | 0.30 | | | 0.43 | |
| Control Delay | | 24.4 | | | 23.7 | | | 23.5 | | | 25.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 24.4 | | | 23.7 | | | 23.5 | | | 25.1 | |
| LOS | | C | | | C | | | C | | | C | |
| Approach Delay | | 24.4 | | | 23.7 | | | 23.5 | | | 25.1 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

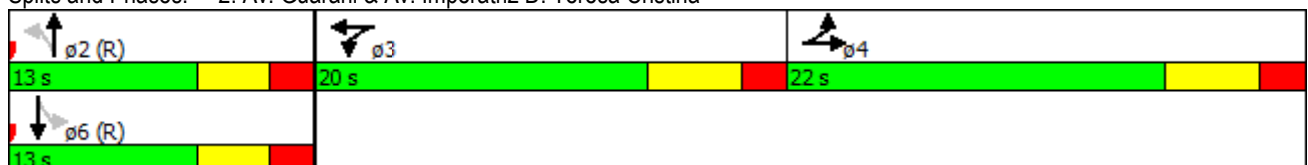


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | C | | | C | | | C | | | C | |
| Stops (vph) | | 523 | | | 422 | | | 44 | | | 107 | |
| Fuel Used(l) | | 34 | | | 35 | | | 2 | | | 6 | |
| CO Emissions (g/hr) | | 637 | | | 656 | | | 43 | | | 111 | |
| NOx Emissions (g/hr) | | 123 | | | 127 | | | 8 | | | 21 | |
| VOC Emissions (g/hr) | | 147 | | | 151 | | | 10 | | | 26 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 34.2 | | | 28.3 | | | 5.6 | | | 8.8 | |
| Queue Length 95th (m) | | #53.4 | | | 42.8 | | | 6.6 | | | 13.1 | |
| Internal Link Dist (m) | | 57.4 | | | 66.4 | | | 62.2 | | | 77.3 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 917 | | | 824 | | | 373 | | | 408 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.76 | | | 0.69 | | | 0.30 | | | 0.43 | |

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 55
 Offset: 22 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 24.2
 Intersection LOS: C
 Intersection Capacity Utilization 52.5%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1320 | 75 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Fr _t | | | | | 0.992 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4876 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4876 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 144.0 | | | 138.5 | 280.8 | |
| Travel Time (s) | 10.4 | | | 10.0 | 20.2 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1621 | 92 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1713 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 34.0% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 355 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 382 | 846 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.971 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.985 | |
| Satd. Flow (prot) | 0 | 3335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4828 | 0 |
| Flt Permitted | | | | | | | | | | | 0.985 | |
| Satd. Flow (perm) | 0 | 3335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4828 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 49.7 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.6 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.78 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.94 | 0.91 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 431 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 459 | 1051 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 534 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1510 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 24.0 | | | | | | | | 53.0 | 53.0 | |
| Total Split (%) | | 31.2% | | | | | | | | 68.8% | 68.8% | |
| Maximum Green (s) | | 17.0 | | | | | | | | 48.0 | 48.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 17.0 | | | | | | | | | 48.0 | |
| Actuated g/C Ratio | | 0.22 | | | | | | | | | 0.62 | |
| v/c Ratio | | 0.73 | | | | | | | | | 0.50 | |
| Control Delay | | 34.4 | | | | | | | | | 8.7 | |
| Queue Delay | | 0.0 | | | | | | | | | 49.3 | |
| Total Delay | | 34.4 | | | | | | | | | 58.0 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 34.4 | | | | | | | | | 58.0 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Approach LOS | | C | | | | | | | | | | E |
| Stops (vph) | | 432 | | | | | | | | | | 696 |
| Fuel Used(l) | | 25 | | | | | | | | | | 31 |
| CO Emissions (g/hr) | | 459 | | | | | | | | | | 573 |
| NOx Emissions (g/hr) | | 89 | | | | | | | | | | 111 |
| VOC Emissions (g/hr) | | 106 | | | | | | | | | | 132 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 40.2 | | | | | | | | | | 41.0 |
| Queue Length 95th (m) | | 57.5 | | | | | | | | | | 51.5 |
| Internal Link Dist (m) | | 25.7 | | | | 7.7 | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 736 | | | | | | | | | | 3009 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 1810 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.73 | | | | | | | | | | 1.26 |

Intersection Summary

Area Type: Other

Cycle Length: 77

Actuated Cycle Length: 77

Offset: 58 (75%), Referenced to phase 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 51.8

Intersection LOS: D

Intersection Capacity Utilization 50.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1228 | 675 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 15% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.946 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4650 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4650 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 60.8 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.4 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.92 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.90 | 0.88 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 456 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1542 | 867 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 456 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2409 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.15 | 1.15 | 1.15 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 24.0 | | | | | | | | | 46.0 | |
| Total Split (%) | | 34.3% | | | | | | | | | 65.7% | |
| Maximum Green (s) | | 17.0 | | | | | | | | | 41.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 17.0 | | | | | | | | | 41.0 | |
| Actuated g/C Ratio | | 0.24 | | | | | | | | | 0.59 | |
| v/c Ratio | | 0.60 | | | | | | | | | 0.95dr | |
| Control Delay | | 27.3 | | | | | | | | | 17.8 | |
| Queue Delay | | 0.0 | | | | | | | | | 46.5 | |
| Total Delay | | 27.3 | | | | | | | | | 64.4 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 27.3 | | | | | | | | | 64.4 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|------|-----|------|-----|------|-----|-------|
| Approach LOS | | C | | | | | | | | | | E |
| Stops (vph) | | 367 | | | | | | | | | | 1675 |
| Fuel Used(l) | | 20 | | | | | | | | | | 81 |
| CO Emissions (g/hr) | | 367 | | | | | | | | | | 1507 |
| NOx Emissions (g/hr) | | 71 | | | | | | | | | | 291 |
| VOC Emissions (g/hr) | | 85 | | | | | | | | | | 348 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 29.3 | | | | | | | | | | 93.6 |
| Queue Length 95th (m) | | 44.0 | | | | | | | | | | 119.6 |
| Internal Link Dist (m) | | 36.8 | | | | 12.6 | | 21.2 | | 44.4 | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 761 | | | | | | | | | | 2723 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 878 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.60 | | | | | | | | | | 1.31 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 58 (83%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 58.5

Intersection LOS: E

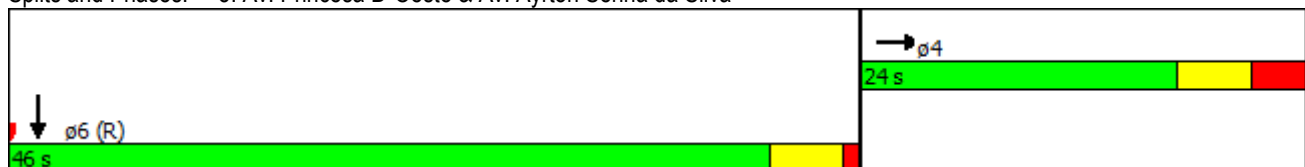
Intersection Capacity Utilization 65.7%

ICU Level of Service C

Analysis Period (min) 15

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



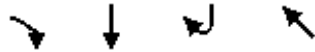
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑↑ | | ↑↑ |
| Volume (vph) | 181 | 1311 | 9 | 270 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 0% |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.998 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1513 | 4907 | 0 | 3355 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1513 | 4907 | 0 | 3355 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 138.5 | | 31.2 |
| Travel Time (s) | | 10.0 | | 2.2 |
| Peak Hour Factor | 0.66 | 0.91 | 0.45 | 0.89 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 5% | 2% | 0% | 4% |
| Adj. Flow (vph) | 310 | 1628 | 23 | 343 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 310 | 1651 | 0 | 343 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 39.0 | | 31.0 |
| Total Split (%) | | 55.7% | | 44.3% |
| Maximum Green (s) | | 34.0 | | 26.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 70.0 | 34.0 | | 26.0 |
| Actuated g/C Ratio | 1.00 | 0.49 | | 0.37 |
| v/c Ratio | 0.20 | 0.69 | | 0.28 |
| Control Delay | 0.3 | 15.9 | | 16.2 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| Total Delay | 0.3 | 15.9 | | 16.2 |
| LOS | A | B | | B |
| Approach Delay | | 15.9 | | 16.2 |
| Approach LOS | | B | | B |
| Stops (vph) | 0 | 1084 | | 202 |
| Fuel Used(l) | 1 | 62 | | 9 |
| CO Emissions (g/hr) | 14 | 1156 | | 172 |
| NOx Emissions (g/hr) | 3 | 223 | | 33 |
| VOC Emissions (g/hr) | 3 | 267 | | 40 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 60.8 | | 17.0 |
| Queue Length 95th (m) | 0.0 | 76.8 | | 26.0 |
| Internal Link Dist (m) | | 114.5 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1513 | 2383 | | 1246 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.20 | 0.69 | | 0.28 |

Intersection Summary

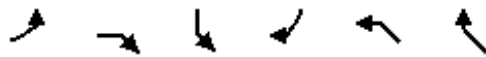
| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 13.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 45.6% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

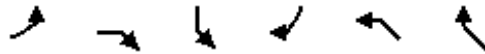
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1139 | 0 | 0 | 0 | 0 | 1580 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 3% | | 3% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3286 | 0 | 0 | 0 | 0 | 3437 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3286 | 0 | 0 | 0 | 0 | 3437 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 277.7 | |
| Travel Time (s) | 1.7 | | 4.8 | | 20.0 | |
| Peak Hour Factor | 0.76 | 0.92 | 0.92 | 0.92 | 0.92 | 0.90 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1694 | 0 | 0 | 0 | 0 | 1984 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1694 | 0 | 0 | 0 | 0 | 1984 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 58.0 | | | | | 30.0 |
| Total Split (%) | 65.9% | | | | | 34.1% |
| Maximum Green (s) | 52.0 | | | | | 24.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 52.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.59 | | | | | 0.27 |
| v/c Ratio | 0.87 | | | | | 2.12 |
| Control Delay | 21.7 | | | | | 528.5 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 21.7 | | | | | 528.5 |
| LOS | C | | | | | F |
| Approach Delay | 21.7 | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|-------|-----|------|-----|-------|--------|
| Approach LOS | C | | | | | |
| Stops (vph) | 1012 | | | | | 1277 |
| Fuel Used(l) | 47 | | | | | 831 |
| CO Emissions (g/hr) | 877 | | | | | 15463 |
| NOx Emissions (g/hr) | 169 | | | | | 2984 |
| VOC Emissions (g/hr) | 202 | | | | | 3566 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 120.4 | | | | | ~248.2 |
| Queue Length 95th (m) | 109.5 | | | | | #284.9 |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 253.7 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1941 | | | | | 937 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.87 | | | | | 2.12 |

Intersection Summary

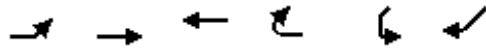
Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 88
 Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.12
 Intersection Signal Delay: 295.1
 Intersection LOS: F
 Intersection Capacity Utilization 88.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 379 | 426 | 0 | 0 | 0 | 675 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1643 | 1747 | 0 | 0 | 0 | 2694 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1643 | 1747 | 0 | 0 | 0 | 2694 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 49.7 | | 60.8 | |
| Travel Time (s) | | 6.6 | 3.6 | | 4.4 | |
| Peak Hour Factor | 0.94 | 0.93 | 0.92 | 0.92 | 0.92 | 0.88 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 456 | 518 | 0 | 0 | 0 | 867 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 456 | 518 | 0 | 0 | 0 | 867 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 121 | 139 | 9 | 53 | 170 | 27 | 3 | 110 | 113 | 22 | 150 | 200 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.993 | | | 0.987 | | | 0.937 | | | 0.929 | |
| Flt Protected | | 0.976 | | | 0.987 | | | 0.998 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 1921 | 0 | 0 | 1924 | 0 | 0 | 1917 | 0 | 0 | 1883 | 0 |
| Flt Permitted | | 0.976 | | | 0.987 | | | 0.998 | | | 0.996 | |
| Satd. Flow (perm) | 0 | 1921 | 0 | 0 | 1924 | 0 | 0 | 1917 | 0 | 0 | 1883 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 273.5 | | | 183.6 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 19.7 | | | 13.2 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.73 | 0.89 | 0.50 | 0.63 | 0.81 | 0.84 | 0.25 | 0.79 | 0.85 | 0.66 | 0.84 | 0.86 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 12% | 0% | 3% | 0% | 0% | 0% | 4% | 5% | 3% | 2% |
| Adj. Flow (vph) | 187 | 176 | 20 | 95 | 237 | 36 | 14 | 157 | 150 | 38 | 202 | 263 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 383 | 0 | 0 | 368 | 0 | 0 | 321 | 0 | 0 | 503 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 77.2% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 303 | 558 | 422 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 5% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.934 | |
| Flt Protected | | | | | 0.973 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1780 | 3092 | 0 |
| Flt Permitted | | | | | 0.973 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1780 | 3092 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 31.3 | | 188.5 | | 38.2 | |
| Travel Time (s) | 2.3 | | 13.6 | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.87 | 0.84 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 3% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 372 | 725 | 568 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 372 | 1293 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.08 | 1.08 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑↑ | | ↑↑↑↑ |
| Volume (vph) | 271 | 1509 | 51 | 1154 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.994 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3319 | 4813 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3319 | 4813 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 196.7 | | 63.1 |
| Travel Time (s) | | 14.2 | | 4.5 |
| Peak Hour Factor | 0.79 | 0.92 | 0.81 | 0.93 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 388 | 1853 | 71 | 1402 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 388 | 1924 | 0 | 1402 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 47.0 | 38.0 | | 41.0 |
| Total Split (%) | 55.3% | 44.7% | | 48.2% |
| Maximum Green (s) | 43.0 | 32.0 | | 36.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 43.0 | 32.0 | | 42.0 |
| Actuated g/C Ratio | 0.51 | 0.38 | | 0.49 |
| v/c Ratio | 0.23 | 1.06 | | 0.60 |
| Control Delay | 12.2 | 67.3 | | 16.8 |
| Queue Delay | 59.9 | 0.0 | | 49.6 |
| Total Delay | 72.1 | 67.3 | | 66.4 |
| LOS | E | E | | E |
| Approach Delay | | 67.3 | | 66.4 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

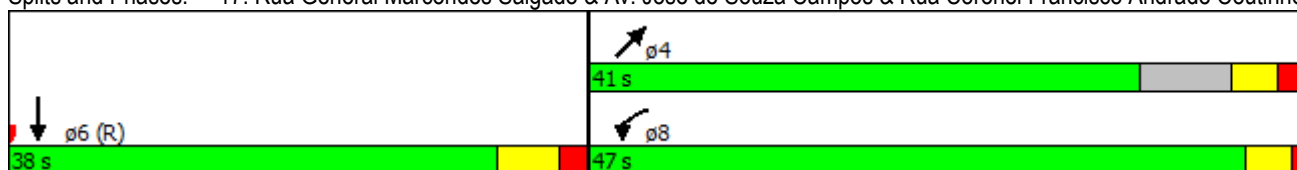


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|--------|------|------|
| Approach LOS | | E | | E |
| Stops (vph) | 161 | 1530 | | 889 |
| Fuel Used(l) | 7 | 158 | | 45 |
| CO Emissions (g/hr) | 139 | 2948 | | 830 |
| NOx Emissions (g/hr) | 27 | 569 | | 160 |
| VOC Emissions (g/hr) | 32 | 680 | | 191 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 18.1 | ~134.3 | | 60.0 |
| Queue Length 95th (m) | 22.7 | #164.7 | | 74.5 |
| Internal Link Dist (m) | | 172.7 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1679 | 1811 | | 2330 |
| Starvation Cap Reductn | 1381 | 0 | | 1238 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.30 | 1.06 | | 1.28 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 85 |
| Actuated Cycle Length: | 85 |
| Offset: | 29 (34%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.06 |
| Intersection Signal Delay: | 67.5 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 80.7% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. |
| | Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. |
| | Queue shown is maximum after two cycles. |

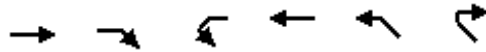
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

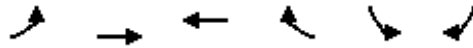


| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 634 | 284 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.954 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3201 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3201 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 31.3 | | | 25.9 | 52.3 | |
| Travel Time (s) | 2.3 | | | 1.9 | 3.8 | |
| Peak Hour Factor | 0.87 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 4% | 4% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 823 | 365 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1188 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.85 | 0.85 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 33.4% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 51 | 181 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1711 | 1749 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1711 | 1749 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.68 | 0.66 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 85 | 310 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 85 | 310 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 28.1% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 270 | 51 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 6% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2642 | 1659 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2642 | 1659 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.92 | 0.89 | 0.68 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 343 | 85 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 343 | 85 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.09 | 1.09 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 28.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↕↕ | | | | | | ↕↕↕ | | | | |
| Volume (vph) | 83 | 654 | 0 | 0 | 0 | 0 | 0 | 619 | 175 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.961 | | | | |
| Flt Protected | | 0.994 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3376 | 0 | 0 | 0 | 0 | 0 | 4467 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.994 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3376 | 0 | 0 | 0 | 0 | 0 | 4467 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.81 | 0.94 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.87 | 0.71 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 116 | 786 | 0 | 0 | 0 | 0 | 0 | 804 | 279 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 902 | 0 | 0 | 0 | 0 | 0 | 1083 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 54.0 | 54.0 | | | | | | 24.0 | | | | |
| Total Split (%) | 69.2% | 69.2% | | | | | | 30.8% | | | | |
| Maximum Green (s) | 47.0 | 47.0 | | | | | | 19.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 47.0 | | | | | | 19.0 | | | | |
| Actuated g/C Ratio | | 0.60 | | | | | | 0.24 | | | | |
| v/c Ratio | | 0.44 | | | | | | 1.00 | | | | |
| Control Delay | | 9.3 | | | | | | 57.4 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 9.3 | | | | | | 57.4 | | | | |
| LOS | | A | | | | | | E | | | | |
| Approach Delay | | 9.3 | | | | | | 57.4 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|------------------------|-----|------|-----|-----|-----|-----|-----|------|-------|-----|-----|------|--|
| Approach LOS | | A | | | | | | | E | | | | |
| Stops (vph) | | 418 | | | | | | | 789 | | | | |
| Fuel Used(l) | | 18 | | | | | | | 60 | | | | |
| CO Emissions (g/hr) | | 331 | | | | | | | 1109 | | | | |
| NOx Emissions (g/hr) | | 64 | | | | | | | 214 | | | | |
| VOC Emissions (g/hr) | | 76 | | | | | | | 256 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | 0 | | | | |
| Queue Length 50th (m) | | 36.0 | | | | | | | 61.6 | | | | |
| Queue Length 95th (m) | | 48.6 | | | | | | | #86.5 | | | | |
| Internal Link Dist (m) | | 7.7 | | | | | | 84.9 | | 3.3 | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | | |
| Base Capacity (vph) | | 2034 | | | | | | | 1088 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 0.44 | | | | | | | 1.00 | | | | |

Intersection Summary

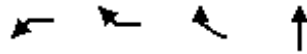
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 78 |
| Actuated Cycle Length: | 78 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.00 |
| Intersection Signal Delay: | 35.5 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 51.1% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |
| # 95th percentile volume exceeds capacity, queue may be longer. | |
| Queue shown is maximum after two cycles. | |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

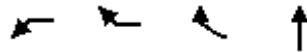


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 411 | 270 | 243 | 1081 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.948 | 0.850 | | |
| Flt Protected | 0.968 | | | |
| Satd. Flow (prot) | 3204 | 1360 | 0 | 4821 |
| Flt Permitted | 0.968 | | | |
| Satd. Flow (perm) | 3204 | 1360 | 0 | 4821 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.91 | 0.89 | 0.94 | 0.88 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 3% | 4% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 510 | 343 | 292 | 1388 |
| Shared Lane Traffic (%) | | 79% | | |
| Lane Group Flow (vph) | 781 | 364 | 0 | 1388 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 47.0 | 47.0 | | 26.0 |
| Total Split (%) | 64.4% | 64.4% | | 35.6% |
| Maximum Green (s) | 42.0 | 42.0 | | 21.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 42.0 | 42.0 | | 21.0 |
| Actuated g/C Ratio | 0.58 | 0.58 | | 0.29 |
| v/c Ratio | 0.42 | 0.47 | | 1.00 |
| Control Delay | 9.6 | 11.4 | | 52.3 |
| Queue Delay | 0.0 | 0.0 | | 37.0 |
| Total Delay | 9.6 | 11.4 | | 89.3 |
| LOS | A | B | | F |
| Approach Delay | 10.2 | | | 89.3 |

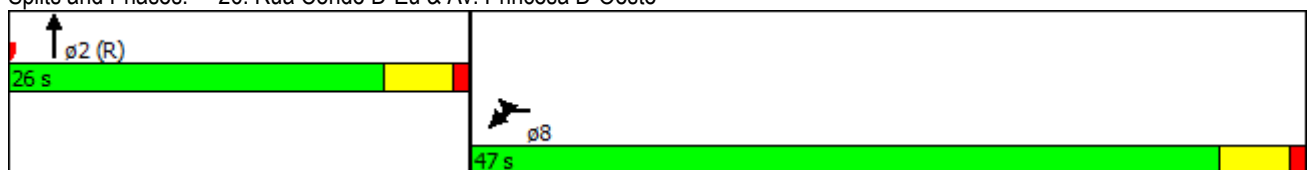


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|--------|
| Approach LOS | B | | | F |
| Stops (vph) | 366 | 187 | | 1068 |
| Fuel Used(l) | 21 | 11 | | 81 |
| CO Emissions (g/hr) | 384 | 198 | | 1507 |
| NOx Emissions (g/hr) | 74 | 38 | | 291 |
| VOC Emissions (g/hr) | 89 | 46 | | 347 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 29.5 | 30.3 | | ~73.1 |
| Queue Length 95th (m) | 41.3 | 51.4 | | #101.9 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1843 | 782 | | 1386 |
| Starvation Cap Reductn | 0 | 0 | | 446 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.42 | 0.47 | | 1.48 |

Intersection Summary

Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 73
 Offset: 2 (3%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 53.5
 Intersection LOS: D
 Intersection Capacity Utilization 58.4%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1139 | 1395 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 3% | | | 3% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3237 | 4795 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3237 | 4795 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 280.8 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.2 | | | 5.9 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.73 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 3% | 3% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1694 | 2159 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1694 | 2159 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 76.0 | 76.0 | 8.0 |
| Total Split (%) | | | | | 90.5% | 90.5% | 10% |
| Maximum Green (s) | | | | | 70.0 | 70.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 70.0 | 70.0 | |
| Actuated g/C Ratio | | | | | 0.83 | 0.83 | |
| v/c Ratio | | | | | 0.63 | 0.54 | |
| Control Delay | | | | | 3.7 | 2.7 | |
| Queue Delay | | | | | 4.9 | 2.0 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 8.5 | 4.7 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 6.4 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 375 | 389 | |
| Fuel Used(l) | | | | | 22 | 24 | |
| CO Emissions (g/hr) | | | | | 411 | 452 | |
| NOx Emissions (g/hr) | | | | | 79 | 87 | |
| VOC Emissions (g/hr) | | | | | 95 | 104 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 32.6 | 25.5 | |
| Queue Length 95th (m) | | | | | 29.8 | 21.4 | |
| Internal Link Dist (m) | 0.1 | | 256.8 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2697 | 3995 | |
| Starvation Cap Reductn | | | | | 924 | 1616 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.96 | 0.91 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 84 |
| Actuated Cycle Length: | 84 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.63 |
| Intersection Signal Delay: | 6.4 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 56.5% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 1695 | 0 | 0 | 1217 | 250 | 241 | 434 | 99 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | | | | | 0.974 | | | 0.997 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4586 | 0 | 1711 | 1709 | 1373 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4586 | 0 | 1711 | 1709 | 1373 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 60.8 | | | 197.5 | | | 40.5 | | 59.4 | |
| Travel Time (s) | | 4.4 | | | 14.2 | | | 2.9 | | 4.3 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.92 | 0.92 | 0.86 | 0.83 | 0.86 | 0.67 | 0.83 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 8% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2060 | 0 | 0 | 1599 | 340 | 317 | 732 | 135 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 2060 | 0 | 0 | 1939 | 0 | 317 | 746 | 121 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 22.0 | | | 21.0 | | 27.0 | 27.0 | 27.0 | | |
| Total Split (s) | | 59.0 | | | 54.0 | | 32.0 | 32.0 | 32.0 | | |
| Total Split (%) | | 64.8% | | | 59.3% | | 35.2% | 35.2% | 35.2% | | |
| Maximum Green (s) | | 54.0 | | | 50.0 | | 27.0 | 27.0 | 27.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 54.0 | | | 55.0 | | 27.0 | 27.0 | 27.0 | | |
| Actuated g/C Ratio | | 0.59 | | | 0.60 | | 0.30 | 0.30 | 0.30 | | |
| v/c Ratio | | 0.74 | | | 0.70 | | 0.63 | 1.47 | 0.30 | | |
| Control Delay | | 5.0 | | | 14.1 | | 34.0 | 246.8 | 28.7 | | |
| Queue Delay | | 28.4 | | | 0.1 | | 65.6 | 5.2 | 54.1 | | |
| Total Delay | | 33.4 | | | 14.2 | | 99.7 | 252.0 | 82.8 | | |
| LOS | | C | | | B | | F | F | F | | |
| Approach Delay | | 33.4 | | | 14.2 | | | 194.0 | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

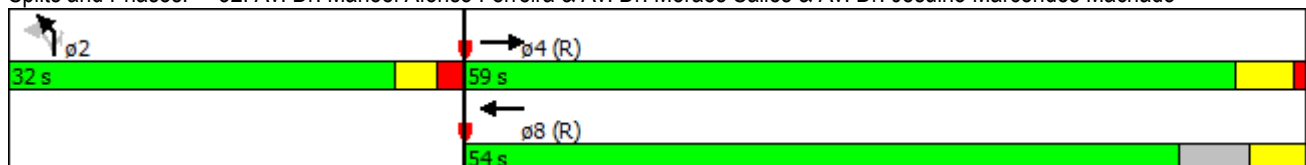


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|-------|-----|-----|-------|-----|-------|---------|-------|------|-----|
| Approach LOS | | C | | | B | | | F | | | |
| Stops (vph) | | 592 | | | 1066 | | 246 | 388 | 85 | | |
| Fuel Used(l) | | 32 | | | 73 | | 14 | 106 | 4 | | |
| CO Emissions (g/hr) | | 589 | | | 1356 | | 255 | 1971 | 84 | | |
| NOx Emissions (g/hr) | | 114 | | | 262 | | 49 | 380 | 16 | | |
| VOC Emissions (g/hr) | | 136 | | | 313 | | 59 | 455 | 19 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | 25.2 | | | 82.0 | | 55.1 | ~195.1 | 21.3 | | |
| Queue Length 95th (m) | | m25.2 | | | 91.4 | | m57.2 | m#139.3 | m24.8 | | |
| Internal Link Dist (m) | | 36.8 | | | 173.5 | | | 16.5 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2802 | | | 2771 | | 507 | 507 | 407 | | |
| Starvation Cap Reductn | | 848 | | | 0 | | 330 | 207 | 290 | | |
| Spillback Cap Reductn | | 0 | | | 105 | | 38 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 1.05 | | | 0.73 | | 1.79 | 2.49 | 1.03 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 91
 Actuated Cycle Length: 91
 Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.47
 Intersection Signal Delay: 62.9
 Intersection LOS: E
 Intersection Capacity Utilization 145.6%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↕↑ | |
| Volume (vph) | 366 | 215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 407 | 66 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 6% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frnt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.970 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2591 | 0 |
| Flt Permitted | | 0.970 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2591 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 25.9 | | | 73.4 | | 40.5 | | 125.7 | | |
| Travel Time (s) | | 1.9 | | | 5.3 | | 2.9 | | 9.1 | | |
| Peak Hour Factor | 0.94 | 0.88 | 0.88 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.76 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 2% | 3% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% |
| Adj. Flow (vph) | 440 | 276 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 605 | 81 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 716 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 686 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | | | 21.0 | |
| Total Split (s) | 69.0 | 69.0 | | | | | | | | 22.0 | |
| Total Split (%) | 75.8% | 75.8% | | | | | | | | 24.2% | |
| Maximum Green (s) | 64.0 | 64.0 | | | | | | | | 17.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | | | | | | | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 64.0 | | | | | | | | 17.0 | |
| Actuated g/C Ratio | | 0.70 | | | | | | | | 0.19 | |
| v/c Ratio | | 0.31 | | | | | | | | 1.42 | |
| Control Delay | | 5.2 | | | | | | | | 230.6 | |
| Queue Delay | | 0.0 | | | | | | | | 4.0 | |
| Total Delay | | 5.2 | | | | | | | | 234.6 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 5.2 | | | | | | | | | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|------------------------|-----|-------|-----|-----|------|-----|------|-----|-------|--------|------|
| Approach LOS | | A | | | | | | | | | |
| Stops (vph) | | 199 | | | | | | | | 415 | |
| Fuel Used(l) | | 9 | | | | | | | | 110 | |
| CO Emissions (g/hr) | | 161 | | | | | | | | 2054 | |
| NOx Emissions (g/hr) | | 31 | | | | | | | | 396 | |
| VOC Emissions (g/hr) | | 37 | | | | | | | | 474 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | |
| Queue Length 50th (m) | | 21.0 | | | | | | | | ~97.6 | |
| Queue Length 95th (m) | | m24.1 | | | | | | | | #106.5 | |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | 16.5 | | 101.7 | | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2320 | | | | | | | | 484 | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | |
| Spillback Cap Reductn | | 275 | | | | | | | | 161 | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.35 | | | | | | | | 2.12 | |

Intersection Summary

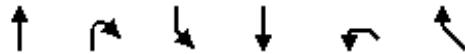
Area Type: Other
 Cycle Length: 91
 Actuated Cycle Length: 91
 Offset: 42 (46%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 1.42
 Intersection Signal Delay: 117.4 Intersection LOS: F
 Intersection Capacity Utilization 49.9% ICU Level of Service A
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
 37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 863 | 0 | 684 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3353 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3353 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.6 | | | 217.3 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.6 | 4.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1060 | 0 | 840 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1060 | 0 | 840 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

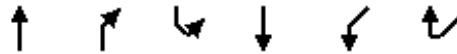
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

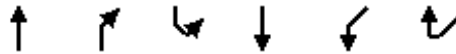


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑↑ | | | | | | |
| Volume (vph) | 1288 | 1431 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 3% | | | 3% | | 3% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.917 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4440 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4440 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | No | | | No | | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | | 50 | |
| Link Distance (m) | 67.0 | | | 63.3 | | 62.0 | |
| Travel Time (s) | 4.8 | | | 4.6 | | 4.5 | |
| Peak Hour Factor | 0.89 | 0.79 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Adj. Flow (vph) | 1635 | 2047 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3682 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.86 | 0.86 | |
| Turning Speed (k/h) | 15 | | 25 | | 25 | | 15 |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 76.0 | | | | | | 8.0 |
| Total Split (%) | 90.5% | | | | | | 10% |
| Maximum Green (s) | 70.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 70.0 | | | | | | |
| Actuated g/C Ratio | 0.83 | | | | | | |
| v/c Ratio | 1.60dr | | | | | | |
| Control Delay | 21.8 | | | | | | |
| Queue Delay | 39.7 | | | | | | |
| Total Delay | 61.5 | | | | | | |
| LOS | E | | | | | | |
| Approach Delay | 61.5 | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|--------|-----|------|-----|------|-----|-----|
| Approach LOS | E | | | | | | |
| Stops (vph) | 2076 | | | | | | |
| Fuel Used(l) | 118 | | | | | | |
| CO Emissions (g/hr) | 2188 | | | | | | |
| NOx Emissions (g/hr) | 422 | | | | | | |
| VOC Emissions (g/hr) | 505 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 141.9 | | | | | | |
| Queue Length 95th (m) | #261.6 | | | | | | |
| Internal Link Dist (m) | 43.0 | | 39.3 | | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 3700 | | | | | | |
| Starvation Cap Reductn | 405 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.12 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 84
 Actuated Cycle Length: 84
 Offset: 32 (38%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 61.5 Intersection LOS: E
 Intersection Capacity Utilization 69.5% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 271 | 227 | 0 | 1288 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 3% | | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr t | | | | | 0.972 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3126 | 1346 | 0 | 4842 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3126 | 1346 | 0 | 4842 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.79 | 0.86 | 0.92 | 0.89 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 388 | 298 | 0 | 1635 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 30% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 477 | 209 | 0 | 1635 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (%) | | | | | 40.5% | 40.5% | 59.5% | 59.5% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 16.0 | 16.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 16.0 | | | | |
| Actuated g/C Ratio | | | | | 0.27 | 0.27 | | 0.43 | | | | |
| v/c Ratio | | | | | 0.57 | 0.58 | | 0.78 | | | | |
| Control Delay | | | | | 14.7 | 19.9 | | 12.4 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 40.8 | | | | |
| Total Delay | | | | | 14.7 | 19.9 | | 53.3 | | | | |
| LOS | | | | | B | B | | D | | | | |
| Approach Delay | | | | | 16.3 | | | 53.3 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

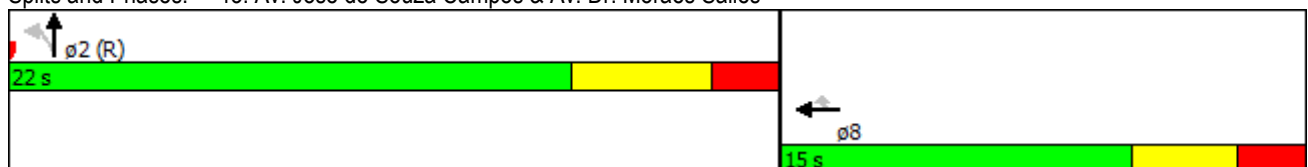


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|-------|-----|------|-----|-----|------|-----|
| Approach LOS | | | | | B | | | D | | | | |
| Stops (vph) | | | | | 304 | 146 | | 1105 | | | | |
| Fuel Used(l) | | | | | 14 | 7 | | 47 | | | | |
| CO Emissions (g/hr) | | | | | 255 | 134 | | 882 | | | | |
| NOx Emissions (g/hr) | | | | | 49 | 26 | | 170 | | | | |
| VOC Emissions (g/hr) | | | | | 59 | 31 | | 203 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 14.3 | 12.6 | | 30.2 | | | | |
| Queue Length 95th (m) | | | | | 20.9 | #27.5 | | 42.2 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 844 | 363 | | 2093 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 584 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.57 | 0.58 | | 1.08 | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 37
 Actuated Cycle Length: 37
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 40
 Control Type: Pretimed
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 42.3 Intersection LOS: D
 Intersection Capacity Utilization 69.5% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|--------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 197 | 441 | 562 | 957 | 629 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.940 | |
| Flt Protected | 0.950 | 0.993 | 0.950 | | |
| Satd. Flow (prot) | 1588 | 3264 | 1641 | 4416 | 0 |
| Flt Permitted | 0.950 | 0.993 | 0.950 | | |
| Satd. Flow (perm) | 1588 | 3264 | 1641 | 4416 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 209.4 | |
| Travel Time (s) | | 2.4 | | 15.1 | |
| Peak Hour Factor | 0.55 | 0.91 | 0.95 | 0.93 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 405 | 548 | 668 | 1163 | 773 |
| Shared Lane Traffic (%) | 24% | | | | |
| Lane Group Flow (vph) | 308 | 645 | 668 | 1936 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 42.0 | 42.0 | 68.0 | 68.0 | |
| Total Split (%) | 38.2% | 38.2% | 61.8% | 61.8% | |
| Maximum Green (s) | 38.0 | 38.0 | 64.0 | 64.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 38.0 | 38.0 | 64.0 | 64.0 | |
| Actuated g/C Ratio | 0.35 | 0.35 | 0.58 | 0.58 | |
| v/c Ratio | 0.56 | 0.57 | 0.70 | 0.91dr | |
| Control Delay | 34.1 | 31.8 | 21.2 | 19.5 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |

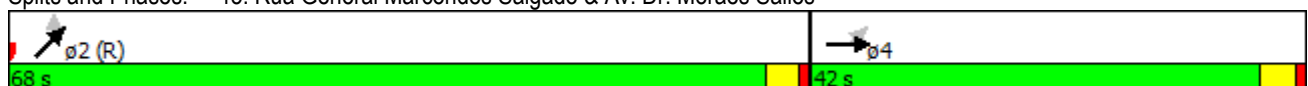


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|-------|-------|-----|
| Total Delay | 34.1 | 31.8 | 21.2 | 19.5 | |
| LOS | C | C | C | B | |
| Approach Delay | | 32.5 | | 20.0 | |
| Approach LOS | | C | | B | |
| Stops (vph) | 136 | 438 | 439 | 1275 | |
| Fuel Used(l) | 8 | 25 | 33 | 91 | |
| CO Emissions (g/hr) | 149 | 466 | 611 | 1696 | |
| NOx Emissions (g/hr) | 29 | 90 | 118 | 327 | |
| VOC Emissions (g/hr) | 34 | 108 | 141 | 391 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 61.6 | 64.7 | 100.3 | 112.3 | |
| Queue Length 95th (m) | 50.1 | 84.8 | 145.9 | 132.1 | |
| Internal Link Dist (m) | | 9.3 | | 185.4 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 548 | 1127 | 954 | 2569 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.56 | 0.57 | 0.70 | 0.75 | |

Intersection Summary

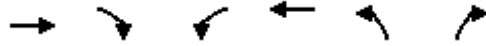
Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 42 (38%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 23.3
 Intersection LOS: C
 Intersection Capacity Utilization 57.3%
 ICU Level of Service B
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019

















| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1036 | 34 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.994 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4799 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4799 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.92 | 0.75 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 4% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1272 | 51 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1323 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 26.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

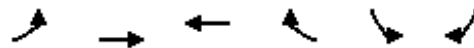
Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade

| |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER | |
| Lane Configurations | | | | |  |  |  | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 4 | 47 | 562 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 | |
| Frt | | | | | | 0.850 | | | | | |
| Flt Protected | | | | | | | 0.950 | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1801 | 1531 | 3351 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | 0.950 | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1801 | 1531 | 3351 | 0 | 0 | 0 | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.81 | 0.95 | 0.92 | 0.92 | 0.92 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 5 | 66 | 668 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 5 | 66 | 668 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | |
| Sign Control | | Stop | | | Stop | | Free | | Stop | | |
| Intersection Summary | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | |
| Control Type: | Unsignalized | | | | | | | | | | |
| Intersection Capacity Utilization | 39.3% | | | | | ICU Level of Service A | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 634 | 0 | 0 | 4 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4916 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4916 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.92 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 787 | 0 | 0 | 5 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 787 | 0 | 0 | 5 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Yield | Yield | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1036 | 0 | 0 | 1498 | 282 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.972 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3423 | 0 | 0 | 4698 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3423 | 0 | 0 | 4698 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.77 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1272 | 0 | 0 | 1840 | 414 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1272 | 0 | 0 | 2254 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 47.0 | | | 45.0 | | | |
| Total Split (%) | | 51.1% | | | 48.9% | | | |
| Maximum Green (s) | | 43.0 | | | 41.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 43.0 | | | 41.0 | | | |
| Actuated g/C Ratio | | 0.47 | | | 0.45 | | | |
| v/c Ratio | | 0.80 | | | 1.08 | | | |
| Control Delay | | 25.4 | | | 70.3 | | | |
| Queue Delay | | 0.0 | | | 11.3 | | | |
| Total Delay | | 25.4 | | | 81.6 | | | |
| LOS | | C | | | F | | | |
| Approach Delay | | | | | 81.6 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

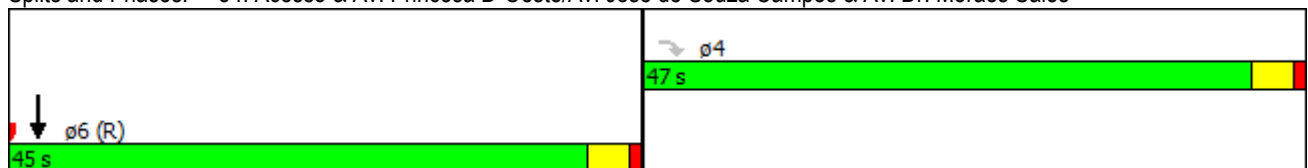


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|-------|-----|------|--------|-----|------|-----|
| Approach LOS | | | | | F | | | |
| Stops (vph) | | 958 | | | 1745 | | | |
| Fuel Used(l) | | 49 | | | 159 | | | |
| CO Emissions (g/hr) | | 909 | | | 2961 | | | |
| NOx Emissions (g/hr) | | 175 | | | 572 | | | |
| VOC Emissions (g/hr) | | 210 | | | 683 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 84.8 | | | ~173.0 | | | |
| Queue Length 95th (m) | | 108.7 | | | #203.8 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1599 | | | 2093 | | | |
| Starvation Cap Reductn | | 0 | | | 800 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.80 | | | 1.74 | | | |

Intersection Summary

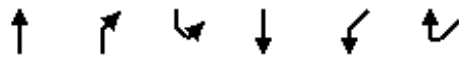
Area Type: Other
 Cycle Length: 92
 Actuated Cycle Length: 92
 Offset: 10 (11%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 61.3
 Intersection LOS: E
 Intersection Capacity Utilization 73.8%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019

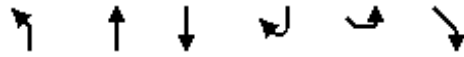


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 34 | 282 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1694 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1694 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.75 | 0.77 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 3% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 51 | 414 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 51 | 414 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.7% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 40 | 794 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4618 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4618 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 138.0 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.9 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.79 | 0.87 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 57 | 1031 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1088 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 40 | 0 | 0 | 0 | 0 | 917 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 146.0 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.5 | | | 1.6 |
| Peak Hour Factor | 0.79 | 0.92 | 0.92 | 0.92 | 0.92 | 0.91 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 57 | 0 | 0 | 0 | 0 | 1139 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 57 | 0 | 0 | 0 | 0 | 1139 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 379 | 0 | 0 | 702 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3286 | 0 | 0 | 4868 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3286 | 0 | 0 | 4868 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.94 | 0.92 | 0.92 | 0.87 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 456 | 0 | 0 | 912 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 456 | 0 | 0 | 912 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 22.0 | | | 23.0 | | |
| Total Split (s) | 53.0 | | | 24.0 | | |
| Total Split (%) | 68.8% | | | 31.2% | | |
| Maximum Green (s) | 47.0 | | | 17.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 2.0 | | | 3.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 6.0 | | | 7.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 47.0 | | | 17.0 | | |
| Actuated g/C Ratio | 0.61 | | | 0.22 | | |
| v/c Ratio | 0.23 | | | 0.85 | | |
| Control Delay | 7.1 | | | 37.9 | | |
| Queue Delay | 56.8 | | | 48.9 | | |
| Total Delay | 63.9 | | | 86.9 | | |
| LOS | E | | | F | | |
| Approach Delay | 63.9 | | | 86.9 | | |
| Approach LOS | E | | | F | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|-----|-----|-------|------|-----|
| Stops (vph) | 178 | | | 712 | | |
| Fuel Used(l) | 8 | | | 44 | | |
| CO Emissions (g/hr) | 146 | | | 822 | | |
| NOx Emissions (g/hr) | 28 | | | 159 | | |
| VOC Emissions (g/hr) | 34 | | | 190 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 14.5 | | | 49.3 | | |
| Queue Length 95th (m) | 21.2 | | | #62.7 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2005 | | | 1074 | | |
| Starvation Cap Reductn | 1609 | | | 297 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 1.15 | | | 1.17 | | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 77 |
| Actuated Cycle Length: | 77 |
| Offset: | 4 (5%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.85 |
| Intersection Signal Delay: | 79.2 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 95.9% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

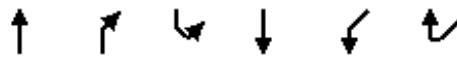
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



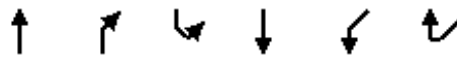
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↗ | |
| Volume (vph) | 0 | 0 | 0 | 1492 | 411 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.91 | 0.91 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1853 | 510 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1853 | 510 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 47.0 | 33.0 | |
| Total Split (%) | | | | 58.8% | 41.3% | |
| Maximum Green (s) | | | | 42.0 | 28.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 28.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.35 | |
| v/c Ratio | | | | 0.72 | 0.44 | |
| Control Delay | | | | 16.5 | 21.4 | |
| Queue Delay | | | | 49.3 | 0.0 | |
| Total Delay | | | | 65.8 | 21.4 | |
| LOS | | | | E | C | |
| Approach Delay | | | | 65.8 | 21.4 | |
| Approach LOS | | | | E | C | |

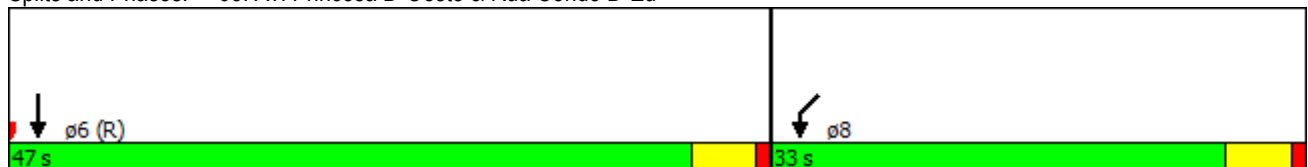


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Stops (vph) | | | | 1210 | 341 | |
| Fuel Used(l) | | | | 55 | 17 | |
| CO Emissions (g/hr) | | | | 1021 | 310 | |
| NOx Emissions (g/hr) | | | | 197 | 60 | |
| VOC Emissions (g/hr) | | | | 235 | 72 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 77.4 | 31.7 | |
| Queue Length 95th (m) | | | | 95.2 | 45.2 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2580 | 1172 | |
| Starvation Cap Reductn | | | | 1462 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.66 | 0.44 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 56.2 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 54.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

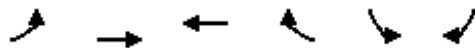
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 370 | 24 | 0 | 128 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.985 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3297 | 0 | 0 | 1558 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3297 | 0 | 0 | 1558 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.52 | 0.92 | 0.83 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 3% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 454 | 52 | 0 | 174 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 506 | 0 | 0 | 174 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 28.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1154 | 0 | 0 | 0 | 0 | 1515 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 3% | 3% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3437 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3437 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.93 | 0.92 | 0.92 | 0.92 | 0.92 | 0.89 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1402 | 0 | 0 | 0 | 0 | 1924 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1402 | 0 | 0 | 0 | 0 | 1924 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 47.0 | | | | | 22.0 |
| Total Split (%) | 68.1% | | | | | 31.9% |
| Maximum Green (s) | 43.0 | | | | | 16.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 43.0 | | | | | 16.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.23 |
| v/c Ratio | 0.65 | | | | | 2.42 |
| Control Delay | 10.1 | | | | | 660.6 |
| Queue Delay | 49.6 | | | | | 2.6 |
| Total Delay | 59.6 | | | | | 663.2 |
| LOS | E | | | | | F |
| Approach Delay | 59.6 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|------|-----|-----|------|------|--------|
| Approach LOS | E | | | | | |
| Stops (vph) | 761 | | | | | 1400 |
| Fuel Used(l) | 32 | | | | | 908 |
| CO Emissions (g/hr) | 599 | | | | | 16891 |
| NOx Emissions (g/hr) | 116 | | | | | 3260 |
| VOC Emissions (g/hr) | 138 | | | | | 3896 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 55.3 | | | | | ~193.4 |
| Queue Length 95th (m) | 75.1 | | | | | #225.3 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2153 | | | | | 796 |
| Starvation Cap Reductn | 1089 | | | | | 257 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.32 | | | | | 3.57 |

Intersection Summary

Area Type: Other
 Cycle Length: 69
 Actuated Cycle Length: 69
 Offset: 5 (7%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 130
 Control Type: Pretimed
 Maximum v/c Ratio: 2.42
 Intersection Signal Delay: 408.8
 Intersection LOS: F
 Intersection Capacity Utilization 84.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Macedo

11/1/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1518 | 447 | 0 | 1458 | 0 | 177 | 533 | 153 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3134 | 1364 | 0 | 4868 | 0 | 0 | 3360 | 1516 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3134 | 1364 | 0 | 4868 | 0 | 0 | 3360 | 1516 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 144.4 | | | 60.8 | | | 63.6 | | 38.2 | |
| Travel Time (s) | | 10.4 | | | 4.4 | | | 4.6 | | 2.8 | |
| Peak Hour Factor | 0.92 | 0.93 | 0.79 | 0.92 | 0.86 | 0.92 | 0.87 | 0.86 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 3% | 2% | 0% | 1% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1844 | 639 | 0 | 1916 | 0 | 230 | 700 | 188 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1908 | 575 | 0 | 1916 | 0 | 0 | 930 | 188 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 27.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 54.0 | 54.0 | | 59.0 | | 32.0 | 32.0 | 32.0 | | |
| Total Split (%) | | 59.3% | 59.3% | | 64.8% | | 35.2% | 35.2% | 35.2% | | |
| Maximum Green (s) | | 50.0 | 50.0 | | 54.0 | | 27.0 | 27.0 | 27.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 55.0 | 55.0 | | 54.0 | | | 27.0 | 27.0 | | |
| Actuated g/C Ratio | | 0.60 | 0.60 | | 0.59 | | | 0.30 | 0.30 | | |
| v/c Ratio | | 1.01 | 0.70 | | 0.66 | | | 0.93 | 0.42 | | |
| Control Delay | | 41.8 | 18.0 | | 7.1 | | | 48.6 | 29.2 | | |
| Queue Delay | | 23.7 | 0.0 | | 0.6 | | | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

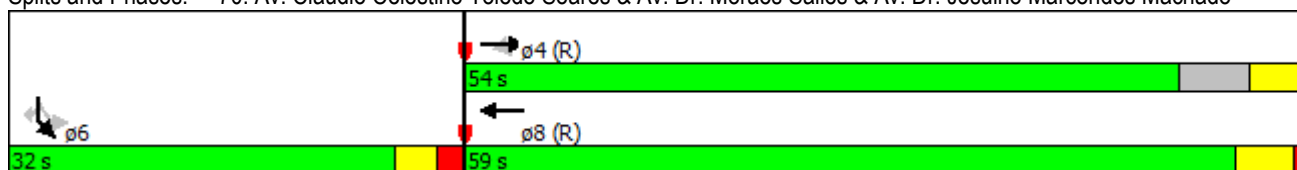


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|------|-----|------|-----|------|--------|------|------|-----|
| Total Delay | | 65.5 | 18.0 | | 7.7 | | | 48.6 | 29.2 | | |
| LOS | | E | B | | A | | | D | C | | |
| Approach Delay | | 54.5 | | | 7.7 | | | 45.3 | | | |
| Approach LOS | | D | | | A | | | D | | | |
| Stops (vph) | | 1465 | 306 | | 582 | | | 711 | 136 | | |
| Fuel Used(l) | | 114 | 19 | | 32 | | | 51 | 8 | | |
| CO Emissions (g/hr) | | 2116 | 361 | | 587 | | | 944 | 148 | | |
| NOx Emissions (g/hr) | | 408 | 70 | | 113 | | | 182 | 29 | | |
| VOC Emissions (g/hr) | | 488 | 83 | | 135 | | | 218 | 34 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~182.1 | 72.9 | | 33.1 | | | 85.3 | 27.7 | | |
| Queue Length 95th (m) | | #250.2 | 91.0 | | 35.2 | | | #114.3 | 47.6 | | |
| Internal Link Dist (m) | | 120.4 | | | 36.8 | | | 39.6 | | 14.2 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1894 | 824 | | 2888 | | | 996 | 449 | | |
| Starvation Cap Reductn | | 0 | 0 | | 537 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 116 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.07 | 0.70 | | 0.81 | | | 0.93 | 0.42 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 91
 Actuated Cycle Length: 91
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 36.4
 Intersection LOS: D
 Intersection Capacity Utilization 145.6%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.952 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 0 | 514 | 726 | 340 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 514 | 1066 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.5% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.997 | | | 0.997 | | | 0.983 | | | 0.915 | |
| Flt Protected | | 0.978 | | | 0.990 | | | 0.990 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 3199 | 0 | 0 | 3037 | 0 |
| Flt Permitted | | 0.978 | | | 0.990 | | | 0.871 | | | 0.925 | |
| Satd. Flow (perm) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 2815 | 0 | 0 | 2821 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 99.0 | | | 99.0 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 7.1 | | | 7.1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 447 | 518 | 21 | 116 | 428 | 12 | 30 | 107 | 18 | 8 | 41 | 64 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 986 | 0 | 0 | 556 | 0 | 0 | 155 | 0 | 0 | 113 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 19.0 | 19.0 | | 23.0 | 23.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 34.5% | 34.5% | | 41.8% | 41.8% | | 23.6% | 23.6% | | 23.6% | 23.6% | |
| Maximum Green (s) | 13.0 | 13.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 13.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.24 | | | 0.31 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 1.31 | | | 0.55 | | | 0.38 | | | 0.28 | |
| Control Delay | | 172.3 | | | 18.4 | | | 24.3 | | | 23.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 172.3 | | | 18.4 | | | 24.3 | | | 23.0 | |
| LOS | | F | | | B | | | C | | | C | |
| Approach Delay | | 172.3 | | | 18.4 | | | 24.3 | | | 23.0 | |
| Approach LOS | | F | | | B | | | C | | | C | |

Lanes, Volumes, Timings
 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

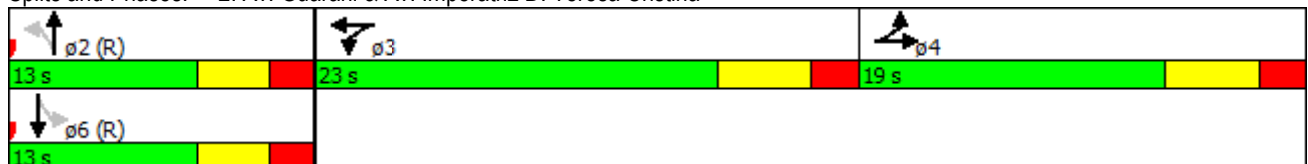


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Stops (vph) | | 770 | | | 423 | | | 129 | | | 92 | |
| Fuel Used(l) | | 160 | | | 36 | | | 7 | | | 5 | |
| CO Emissions (g/hr) | | 2967 | | | 664 | | | 132 | | | 93 | |
| NOx Emissions (g/hr) | | 573 | | | 128 | | | 25 | | | 18 | |
| VOC Emissions (g/hr) | | 684 | | | 153 | | | 30 | | | 21 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | ~72.7 | | | 25.1 | | | 7.8 | | | 5.6 | |
| Queue Length 95th (m) | | #105.9 | | | 38.6 | | | 15.4 | | | 11.9 | |
| Internal Link Dist (m) | | 79.9 | | | 64.6 | | | 75.0 | | | 75.0 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 753 | | | 1005 | | | 409 | | | 410 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 1.31 | | | 0.55 | | | 0.38 | | | 0.28 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 55 |
| Actuated Cycle Length: | 55 |
| Offset: | 45 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.31 |
| Intersection Signal Delay: | 103.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 64.2% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.986 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1239 | 126 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1365 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Flt | | 0.979 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3258 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3258 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 300% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 491 | 78 | 0 | 0 | 0 | 0 | 0 | 0 | 410 | 824 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 569 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1234 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | | 28.0 | | | | | | | | 42.0 | 42.0 | |
| Total Split (%) | | 40.0% | | | | | | | | 60.0% | 60.0% | |
| Maximum Green (s) | | 21.0 | | | | | | | | 37.0 | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.58 | | | | | | | | | 0.48 | |
| Control Delay | | 23.7 | | | | | | | | | 1.9 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.6 | |
| Total Delay | | 23.7 | | | | | | | | | 2.5 | |
| LOS | | C | | | | | | | | | A | |
| Approach Delay | | 23.7 | | | | | | | | | 2.5 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Approach LOS | | C | | | | | | | | | | A |
| Stops (vph) | | 445 | | | | | | | | | | 57 |
| Fuel Used(l) | | 22 | | | | | | | | | | 8 |
| CO Emissions (g/hr) | | 416 | | | | | | | | | | 151 |
| NOx Emissions (g/hr) | | 80 | | | | | | | | | | 29 |
| VOC Emissions (g/hr) | | 96 | | | | | | | | | | 35 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 34.6 | | | | | | | | | | 3.3 |
| Queue Length 95th (m) | | 50.3 | | | | | | | | | | 3.9 |
| Internal Link Dist (m) | | 22.8 | | | | 7.7 | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 977 | | | | | | | | | | 2548 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 806 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.58 | | | | | | | | | | 0.71 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.58 |
| Intersection Signal Delay: | 9.2 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 48.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.948 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1234 | 662 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 627 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1896 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 28.0 | | | | | | | | | 42.0 | |
| Total Split (%) | | 40.0% | | | | | | | | | 60.0% | |
| Maximum Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.63 | | | | | | | | | 0.77 | |
| Control Delay | | 24.5 | | | | | | | | | 15.7 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.9 | |
| Total Delay | | 24.5 | | | | | | | | | 63.7 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 24.5 | | | | | | | | | 63.7 | |
| Approach LOS | | C | | | | | | | | | E | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| Stops (vph) | | 498 | | | | | | | | | | 1351 |
| Fuel Used(l) | | 26 | | | | | | | | | | 64 |
| CO Emissions (g/hr) | | 481 | | | | | | | | | | 1193 |
| NOx Emissions (g/hr) | | 93 | | | | | | | | | | 230 |
| VOC Emissions (g/hr) | | 111 | | | | | | | | | | 275 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 38.8 | | | | | | | | | | 70.1 |
| Queue Length 95th (m) | | 55.6 | | | | | | | | | | 89.0 |
| Internal Link Dist (m) | | 34.2 | | | 12.6 | | | 21.2 | | | | 44.4 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 995 | | | | | | | | | | 2471 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 964 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.63 | | | | | | | | | | 1.26 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.77 |
| Intersection Signal Delay: | 53.9 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 63.8% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 179 | 1185 | 4 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1589 | 4916 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1589 | 4916 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 186 | 1234 | 4 | 459 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 186 | 1238 | 0 | 459 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 35.0 | | 37.0 |
| Total Split (%) | | 48.6% | | 51.4% |
| Maximum Green (s) | | 30.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 72.0 | 30.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.42 | | 0.44 |
| v/c Ratio | 0.12 | 0.60 | | 0.30 |
| Control Delay | 0.2 | 17.9 | | 13.6 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.2 | 17.9 | | 13.6 |
| LOS | A | B | | B |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

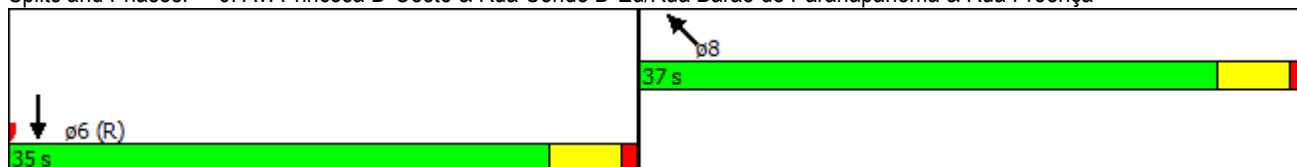


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| Approach Delay | | 17.9 | | 13.6 |
| Approach LOS | | B | | B |
| Stops (vph) | 0 | 875 | | 267 |
| Fuel Used(l) | 1 | 51 | | 12 |
| CO Emissions (g/hr) | 12 | 955 | | 221 |
| NOx Emissions (g/hr) | 2 | 184 | | 43 |
| VOC Emissions (g/hr) | 3 | 220 | | 51 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 48.5 | | 21.1 |
| Queue Length 95th (m) | 0.0 | 62.1 | | 31.1 |
| Internal Link Dist (m) | | 112.1 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1589 | 2048 | | 1505 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.12 | 0.60 | | 0.30 |

Intersection Summary

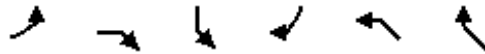
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 72 |
| Actuated Cycle Length: | 72 |
| Offset: | 58 (81%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.60 |
| Intersection Signal Delay: | 15.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 43.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

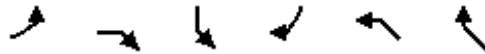
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Fl _t Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Fl _t Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1043 | 0 | 0 | 0 | 0 | 1824 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1043 | 0 | 0 | 0 | 0 | 1824 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 64.0 | | | | | 40.0 |
| Total Split (%) | 61.5% | | | | | 38.5% |
| Maximum Green (s) | 58.0 | | | | | 34.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 58.0 | | | | | 34.0 |
| Actuated g/C Ratio | 0.56 | | | | | 0.33 |
| v/c Ratio | 0.57 | | | | | 1.63 |
| Control Delay | 15.1 | | | | | 315.6 |
| Queue Delay | 0.2 | | | | | 0.1 |
| Total Delay | 15.3 | | | | | 315.7 |
| LOS | B | | | | | F |
| Approach Delay | 15.3 | | | | | |
| Approach LOS | B | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019

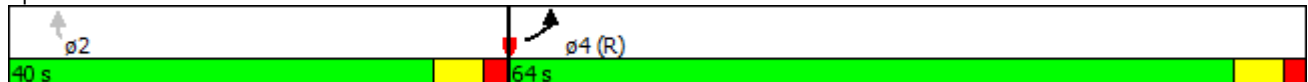


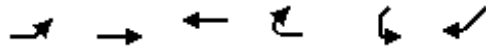
| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|------|-----|------|-----|-------|--------|
| Stops (vph) | 622 | | | | | 1254 |
| Fuel Used(l) | 28 | | | | | 528 |
| CO Emissions (g/hr) | 517 | | | | | 9819 |
| NOx Emissions (g/hr) | 100 | | | | | 1895 |
| VOC Emissions (g/hr) | 119 | | | | | 2265 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 70.5 | | | | | ~246.7 |
| Queue Length 95th (m) | 89.3 | | | | | #283.5 |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1815 | | | | | 1118 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 179 | | | | | 13 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.64 | | | | | 1.65 |

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 104
 Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.63
 Intersection Signal Delay: 206.4
 Intersection LOS: F
 Intersection Capacity Utilization 79.4%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste





| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 627 | 569 | 0 | 0 | 0 | 663 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 627 | 569 | 0 | 0 | 0 | 662 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.998 | | | 0.986 | | | 0.937 | | | 0.931 | |
| Flt Protected | | 0.981 | | | 0.987 | | | | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1948 | 0 | 0 | 1904 | 0 |
| Flt Permitted | | 0.981 | | | 0.987 | | | | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1948 | 0 | 0 | 1904 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 174 | 272 | 7 | 74 | 186 | 30 | 5 | 276 | 246 | 27 | 199 | 233 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 453 | 0 | 0 | 290 | 0 | 0 | 527 | 0 | 0 | 459 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 85.6% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |



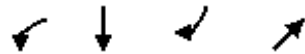
| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 381 | 428 | 378 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.930 | |
| Flt Protected | | | | | 0.974 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1746 | 3179 | 0 |
| Flt Permitted | | | | | 0.974 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1746 | 3179 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 259.2 | | 40.3 | |
| Travel Time (s) | 2.3 | | 18.7 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 397 | 446 | 394 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 397 | 840 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 260 | 1187 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Fr _t | | 0.996 | | |
| Fl _t Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4703 | 0 | 4716 |
| Fl _t Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4703 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 193.3 | | 63.1 |
| Travel Time (s) | | 13.9 | | 4.5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 271 | 1236 | 30 | 1619 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 271 | 1266 | 0 | 1619 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 59.0 | 46.0 | | 53.0 |
| Total Split (%) | 56.2% | 43.8% | | 50.5% |
| Maximum Green (s) | 55.0 | 40.0 | | 48.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 55.0 | 40.0 | | 54.0 |
| Actuated g/C Ratio | 0.52 | 0.38 | | 0.51 |
| v/c Ratio | 0.15 | 0.71 | | 0.67 |
| Control Delay | 13.2 | 30.2 | | 20.6 |
| Queue Delay | 63.7 | 0.0 | | 49.2 |
| Total Delay | 76.9 | 30.2 | | 69.8 |
| LOS | E | C | | E |
| Approach Delay | | 30.2 | | 69.8 |
| Approach LOS | | C | | E |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

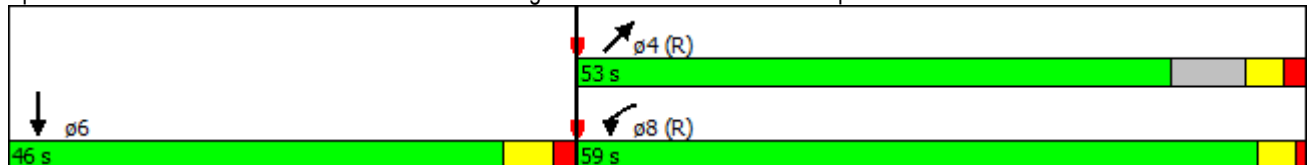


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|-------|------|-------|
| Stops (vph) | 128 | 995 | | 1098 |
| Fuel Used(l) | 6 | 73 | | 59 |
| CO Emissions (g/hr) | 118 | 1355 | | 1088 |
| NOx Emissions (g/hr) | 23 | 261 | | 210 |
| VOC Emissions (g/hr) | 27 | 312 | | 251 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 14.8 | 83.2 | | 90.3 |
| Queue Length 95th (m) | 22.0 | 100.5 | | 107.2 |
| Internal Link Dist (m) | | 169.3 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1755 | 1791 | | 2425 |
| Starvation Cap Reductn | 1531 | 0 | | 1279 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.21 | 0.71 | | 1.41 |

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 50 (48%), Referenced to phase 4:NET and 8:WBL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 54.5
 Intersection LOS: D
 Intersection Capacity Utilization 73.5%
 ICU Level of Service D
 Analysis Period (min) 15

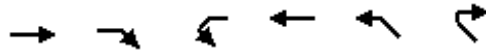
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



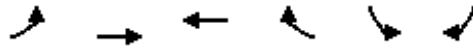
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 497 | 336 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.940 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3222 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3222 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 518 | 350 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 868 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 94 | 186 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 94 | 186 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 464 | 94 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 464 | 94 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↔ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frts | | | | | | | | 0.969 | | | | |
| Flt Protected | | 0.996 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.996 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 71 | 830 | 0 | 0 | 0 | 0 | 0 | 891 | 235 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 901 | 0 | 0 | 0 | 0 | 0 | 1126 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 58.0 | | | | |
| Total Split (%) | 26.6% | 26.6% | | | | | | 73.4% | | | | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 53.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 5.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 53.0 | | | | |
| Actuated g/C Ratio | | 0.20 | | | | | | 0.67 | | | | |
| v/c Ratio | | 1.31 | | | | | | 0.37 | | | | |
| Control Delay | | 177.4 | | | | | | 6.1 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 177.4 | | | | | | 6.1 | | | | |
| LOS | | F | | | | | | A | | | | |
| Approach Delay | | 177.4 | | | | | | 6.1 | | | | |
| Approach LOS | | F | | | | | | A | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Stops (vph) | | 696 | | | | | | 426 | | | | |
| Fuel Used(l) | | 136 | | | | | | 17 | | | | |
| CO Emissions (g/hr) | | 2534 | | | | | | 324 | | | | |
| NOx Emissions (g/hr) | | 489 | | | | | | 63 | | | | |
| VOC Emissions (g/hr) | | 585 | | | | | | 75 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | ~97.5 | | | | | | 24.4 | | | | |
| Queue Length 95th (m) | | #134.4 | | | | | | 31.3 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 690 | | | | | | 3029 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 1.31 | | | | | | 0.37 | | | | |

Intersection Summary

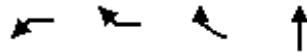
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 79 |
| Actuated Cycle Length: | 79 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.31 |
| Intersection Signal Delay: | 82.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 53.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

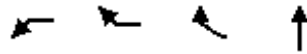


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 457 | 441 | 292 | 1525 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.935 | 0.850 | | |
| Flt Protected | 0.973 | | | |
| Satd. Flow (prot) | 3165 | 1373 | 0 | 4916 |
| Flt Permitted | 0.973 | | | |
| Satd. Flow (perm) | 3165 | 1373 | 0 | 4916 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 476 | 459 | 304 | 1589 |
| Shared Lane Traffic (%) | | 80% | | |
| Lane Group Flow (vph) | 843 | 396 | 0 | 1589 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 43.0 | 43.0 | | 30.0 |
| Total Split (%) | 58.9% | 58.9% | | 41.1% |
| Maximum Green (s) | 38.0 | 38.0 | | 25.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 38.0 | 38.0 | | 25.0 |
| Actuated g/C Ratio | 0.52 | 0.52 | | 0.34 |
| v/c Ratio | 0.51 | 0.55 | | 0.94 |
| Control Delay | 12.8 | 15.5 | | 36.7 |
| Queue Delay | 0.0 | 0.0 | | 45.4 |
| Total Delay | 12.8 | 15.5 | | 82.1 |
| LOS | B | B | | F |
| Approach Delay | 13.7 | | | 82.1 |
| Approach LOS | B | | | F |

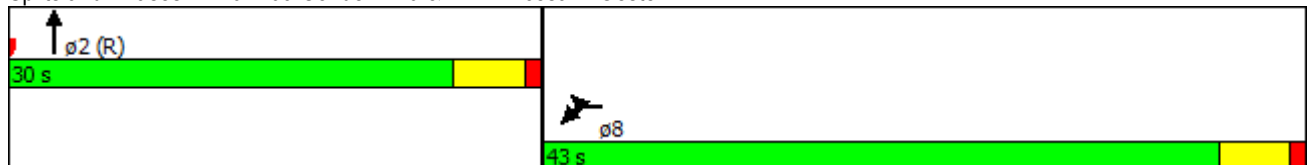


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|--------|
| Stops (vph) | 496 | 249 | | 1334 |
| Fuel Used(l) | 27 | 14 | | 83 |
| CO Emissions (g/hr) | 510 | 261 | | 1542 |
| NOx Emissions (g/hr) | 98 | 50 | | 298 |
| VOC Emissions (g/hr) | 118 | 60 | | 356 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 38.2 | 39.4 | | 80.4 |
| Queue Length 95th (m) | 52.9 | 67.6 | | #112.6 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1647 | 714 | | 1683 |
| Starvation Cap Reductn | 0 | 0 | | 615 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.51 | 0.55 | | 1.49 |

Intersection Summary

Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 73
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 52.1 Intersection LOS: D
 Intersection Capacity Utilization 69.5% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↶↷ | ↵↶↷ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1043 | 1365 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1043 | 1365 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 96.0 | 96.0 | 8.0 |
| Total Split (%) | | | | | 92.3% | 92.3% | 8% |
| Maximum Green (s) | | | | | 90.0 | 90.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 90.0 | 90.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.38 | 0.33 | |
| Control Delay | | | | | 1.8 | 1.6 | |
| Queue Delay | | | | | 1.6 | 1.0 | |
| Total Delay | | | | | 3.5 | 2.5 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 2.9 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 161 | 199 | |
| Fuel Used(l) | | | | | 13 | 16 | |
| CO Emissions (g/hr) | | | | | 239 | 302 | |
| NOx Emissions (g/hr) | | | | | 46 | 58 | |
| VOC Emissions (g/hr) | | | | | 55 | 70 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 14.2 | 12.4 | |
| Queue Length 95th (m) | | | | | 18.2 | 15.0 | |
| Internal Link Dist (m) | 0.1 | | 254.1 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2760 | 4088 | |
| Starvation Cap Reductn | | | | | 1473 | 2325 | |
| Spillback Cap Reductn | | | | | 850 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.81 | 0.77 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.38 |
| Intersection Signal Delay: | 2.9 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 55.7% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 1714 | 0 | 0 | 1650 | 262 | 292 | 733 | 66 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Fr't | | | | | 0.979 | | | 0.999 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 6% | 2% | 2% | 4% | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1785 | 0 | 0 | 1719 | 273 | 304 | 764 | 69 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 1785 | 0 | 0 | 1992 | 0 | 304 | 771 | 62 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 73.0 | | | 68.0 | | 37.0 | 37.0 | 37.0 | | |
| Total Split (%) | | 66.4% | | | 61.8% | | 33.6% | 33.6% | 33.6% | | |
| Maximum Green (s) | | 68.0 | | | 64.0 | | 32.0 | 32.0 | 32.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 68.0 | | | 69.0 | | 32.0 | 32.0 | 32.0 | | |
| Actuated g/C Ratio | | 0.62 | | | 0.63 | | 0.29 | 0.29 | 0.29 | | |
| v/c Ratio | | 0.63 | | | 0.69 | | 0.61 | 1.55 | 0.15 | | |
| Control Delay | | 14.4 | | | 15.1 | | 39.9 | 286.5 | 30.2 | | |
| Queue Delay | | 48.6 | | | 0.0 | | 72.1 | 6.8 | 95.5 | | |
| Total Delay | | 63.0 | | | 15.1 | | 111.9 | 293.3 | 125.7 | | |
| LOS | | E | | | B | | F | F | F | | |
| Approach Delay | | 63.0 | | | 15.1 | | | 235.7 | | | |
| Approach LOS | | E | | | B | | | F | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

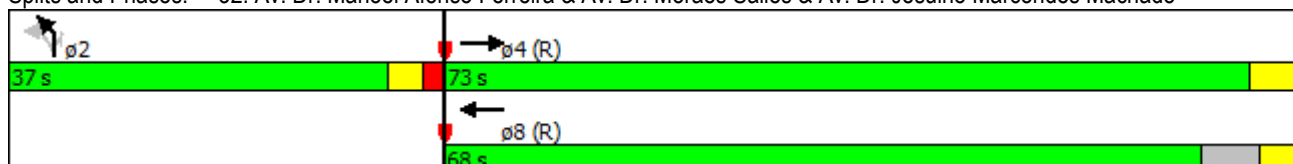


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|-------|-----|-----|-------|-----|------|--------|------|------|-----|
| Stops (vph) | | 1013 | | | 1189 | | 248 | 539 | 44 | | |
| Fuel Used(l) | | 51 | | | 85 | | 16 | 178 | 3 | | |
| CO Emissions (g/hr) | | 953 | | | 1576 | | 289 | 3308 | 48 | | |
| NOx Emissions (g/hr) | | 184 | | | 304 | | 56 | 639 | 9 | | |
| VOC Emissions (g/hr) | | 220 | | | 363 | | 67 | 763 | 11 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | 85.6 | | | 100.1 | | 59.2 | ~245.9 | 10.9 | | |
| Queue Length 95th (m) | | 100.8 | | | 117.2 | | 89.4 | #320.4 | 22.4 | | |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 13.6 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2836 | | | 2883 | | 497 | 498 | 422 | | |
| Starvation Cap Reductn | | 1438 | | | 0 | | 371 | 237 | 367 | | |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 1.28 | | | 0.69 | | 2.41 | 2.95 | 1.13 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.55
 Intersection Signal Delay: 83.5
 Intersection LOS: F
 Intersection Capacity Utilization 152.2%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↑↕ | |
| Volume (vph) | 326 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 761 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frnt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.971 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Flt Permitted | | 0.971 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 155.6 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 11.2 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 340 | 229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 793 | 58 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 569 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 851 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 85.0 | 85.0 | | | | | | | | 26.0 | |
| Total Split (%) | 76.6% | 76.6% | | | | | | | | 23.4% | |
| Maximum Green (s) | 81.0 | 81.0 | | | | | | | | 22.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 4.0 | | | | | | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 81.0 | | | | | | | | 22.0 | |
| Actuated g/C Ratio | | 0.73 | | | | | | | | 0.20 | |
| v/c Ratio | | 0.24 | | | | | | | | 1.63 | |
| Control Delay | | 5.2 | | | | | | | | 321.9 | |
| Queue Delay | | 0.0 | | | | | | | | 0.0 | |
| Total Delay | | 5.2 | | | | | | | | 321.9 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 5.2 | | | | | | | | | |
| Approach LOS | | A | | | | | | | | | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

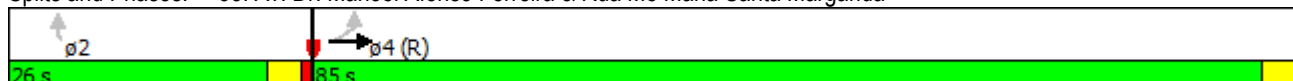


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|------------------------|-----|------|-----|-----|------|-----|------|-----|-------|--------|------|
| Stops (vph) | | 164 | | | | | | | | 585 | |
| Fuel Used(l) | | 7 | | | | | | | | 228 | |
| CO Emissions (g/hr) | | 127 | | | | | | | | 4233 | |
| NOx Emissions (g/hr) | | 24 | | | | | | | | 817 | |
| VOC Emissions (g/hr) | | 29 | | | | | | | | 976 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | |
| Queue Length 50th (m) | | 19.3 | | | | | | | | ~159.3 | |
| Queue Length 95th (m) | | 25.5 | | | | | | | | #202.8 | |
| Internal Link Dist (m) | | 0.1 | | | 49.4 | | 13.6 | | 131.6 | | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2405 | | | | | | | | 523 | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.24 | | | | | | | | 1.63 | |

Intersection Summary

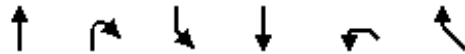
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 111 |
| Actuated Cycle Length: | 111 |
| Offset: | 46 (41%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.63 |
| Intersection Signal Delay: | 195.0 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 53.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
 37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 656 | 0 | 995 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 208.9 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.0 | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 683 | 0 | 1036 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 683 | 0 | 1036 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

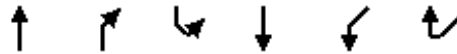
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

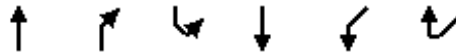
Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|-------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 1867 | 1000 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2867 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 96.0 | | | | | | 8.0 |
| Total Split (%) | 92.3% | | | | | | 8% |
| Maximum Green (s) | 90.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 90.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 0.72 | | | | | | |
| Control Delay | 4.5 | | | | | | |
| Queue Delay | 46.3 | | | | | | |
| Total Delay | 50.8 | | | | | | |
| LOS | D | | | | | | |
| Approach Delay | 50.8 | | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|------|-----|------|-----|-----|
| Approach LOS | D | | | | | | |
| Stops (vph) | 852 | | | | | | |
| Fuel Used(l) | 46 | | | | | | |
| CO Emissions (g/hr) | 857 | | | | | | |
| NOx Emissions (g/hr) | 165 | | | | | | |
| VOC Emissions (g/hr) | 198 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 28.6 | | | | | | |
| Queue Length 95th (m) | m24.2 | | | | | | |
| Internal Link Dist (m) | 43.0 | | 39.3 | | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 3964 | | | | | | |
| Starvation Cap Reductn | 1355 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.10 | | | | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 32 (31%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 50.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 61.1% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.993 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 271 | 128 | 0 | 1867 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 10% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 284 | 115 | 0 | 1867 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 30.0 | 30.0 | | | | |
| Total Split (%) | | | | | 33.3% | 33.3% | 66.7% | 66.7% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 24.0 | 24.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 24.0 | | | | |
| Actuated g/C Ratio | | | | | 0.22 | 0.22 | | 0.53 | | | | |
| v/c Ratio | | | | | 0.39 | 0.38 | | 0.72 | | | | |
| Control Delay | | | | | 16.9 | 19.2 | | 10.0 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 47.8 | | | | |
| Total Delay | | | | | 16.9 | 19.2 | | 57.8 | | | | |
| LOS | | | | | B | B | | E | | | | |
| Approach Delay | | | | | 17.5 | | | 57.8 | | | | |
| Approach LOS | | | | | B | | | E | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

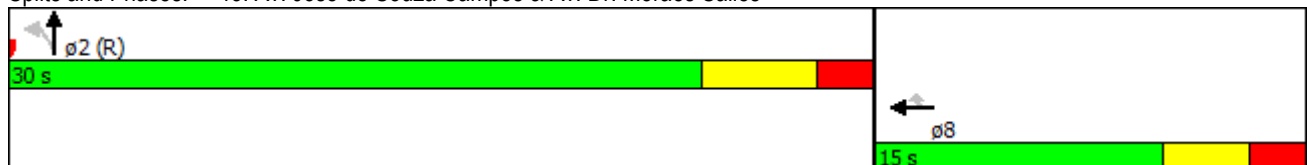


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|-----|
| Stops (vph) | | | | | 217 | 92 | | 1211 | | | | |
| Fuel Used(l) | | | | | 10 | 4 | | 52 | | | | |
| CO Emissions (g/hr) | | | | | 190 | 82 | | 961 | | | | |
| NOx Emissions (g/hr) | | | | | 37 | 16 | | 185 | | | | |
| VOC Emissions (g/hr) | | | | | 44 | 19 | | 222 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 10.9 | 8.9 | | 36.9 | | | | |
| Queue Length 95th (m) | | | | | 19.9 | 21.2 | | 51.4 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 719 | 304 | | 2594 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 950 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.39 | 0.38 | | 1.14 | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 45 |
| Offset: | 5 (11%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 50.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 61.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 725 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.948 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1542 | 3239 | 1658 | 4456 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1542 | 3239 | 1658 | 4456 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 213.6 | |
| Travel Time (s) | | 2.4 | | 15.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 186 | 402 | 721 | 1432 | 755 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 167 | 421 | 721 | 2187 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.56 | 0.67 | 0.58 | 0.65 | |
| Control Delay | 59.4 | 58.6 | 10.0 | 9.7 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 59.4 | 58.6 | 10.0 | 9.7 | |

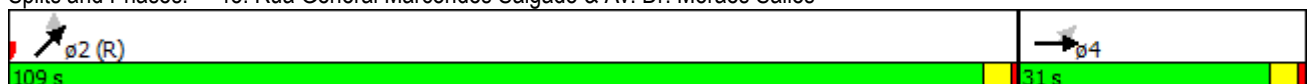


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|-------|-------|-----|
| LOS | E | E | B | A | |
| Approach Delay | | 58.8 | | 9.8 | |
| Approach LOS | | E | | A | |
| Stops (vph) | 143 | 369 | 291 | 963 | |
| Fuel Used(l) | 11 | 28 | 26 | 80 | |
| CO Emissions (g/hr) | 205 | 516 | 482 | 1487 | |
| NOx Emissions (g/hr) | 40 | 100 | 93 | 287 | |
| VOC Emissions (g/hr) | 47 | 119 | 111 | 343 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 49.0 | 63.1 | 82.3 | 101.5 | |
| Queue Length 95th (m) | 77.2 | 83.3 | 112.8 | 114.1 | |
| Internal Link Dist (m) | | 9.3 | | 189.6 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 297 | 624 | 1243 | 3342 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.56 | 0.67 | 0.58 | 0.65 | |

Intersection Summary

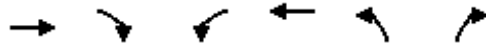
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 24 (17%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 18.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 60.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019

















| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↓ | | | | | |
| Volume (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.996 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1123 | 34 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1157 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

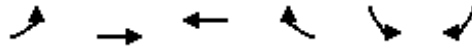
Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade

| |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER | |
| Lane Configurations | | | | |  |  |  | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 | |
| Fr _t | | | | | | 0.850 | | | | | |
| Fl _t Protected | | | | | | | 0.950 | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 | |
| Fl _t Permitted | | | | | | | 0.950 | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2 | 28 | 721 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2 | 28 | 721 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 | |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | |
| Sign Control | | Stop | | | Stop | | Free | | Stop | | |
| Intersection Summary | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | |
| Control Type: | Unsignalized | | | | | | | | | | |
| Intersection Capacity Utilization | 38.0% | | | | | ICU Level of Service A | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↓ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 586 | 0 | 0 | 2 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 586 | 0 | 0 | 2 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.978 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1123 | 0 | 0 | 1284 | 223 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1123 | 0 | 0 | 1507 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 59.0 | | | 63.0 | | | |
| Total Split (%) | | 48.4% | | | 51.6% | | | |
| Maximum Green (s) | | 55.0 | | | 59.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 55.0 | | | 59.0 | | | |
| Actuated g/C Ratio | | 0.45 | | | 0.48 | | | |
| v/c Ratio | | 0.72 | | | 0.67 | | | |
| Control Delay | | 30.6 | | | 25.9 | | | |
| Queue Delay | | 0.0 | | | 49.8 | | | |
| Total Delay | | 30.6 | | | 75.7 | | | |
| LOS | | C | | | E | | | |
| Approach Delay | | | | | 75.7 | | | |
| Approach LOS | | | | | E | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

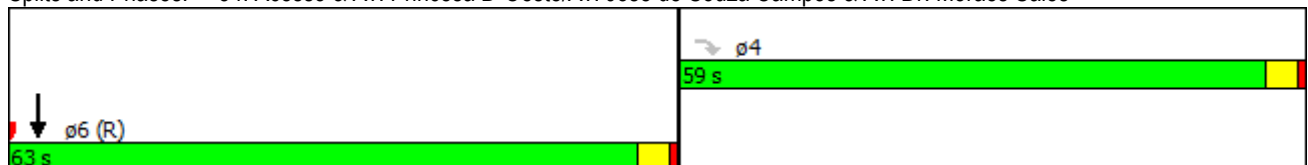


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|-------|-----|------|-------|-----|------|-----|
| Stops (vph) | | 852 | | | 1068 | | | |
| Fuel Used(l) | | 49 | | | 61 | | | |
| CO Emissions (g/hr) | | 904 | | | 1132 | | | |
| NOx Emissions (g/hr) | | 174 | | | 219 | | | |
| VOC Emissions (g/hr) | | 208 | | | 261 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 98.9 | | | 103.5 | | | |
| Queue Length 95th (m) | | 120.9 | | | 120.8 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1558 | | | 2247 | | | |
| Starvation Cap Reductn | | 0 | | | 1243 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.72 | | | 1.50 | | | |

Intersection Summary

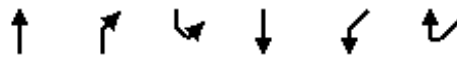
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 122 |
| Actuated Cycle Length: | 122 |
| Offset: | 112 (92%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 56.4 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 60.4% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019

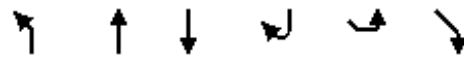


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | ↑ | ↗ | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 34 | 223 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 34 | 223 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 21.9% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 128.3 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.2 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 35 | 1126 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1161 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 136.8 | | | 22.0 |
| Travel Time (s) | 2.4 | | 9.8 | | | 1.6 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 35 | 0 | 0 | 0 | 0 | 902 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 35 | 0 | 0 | 0 | 0 | 902 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↗ | | | ↑↑↑ | | |
| Volume (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 627 | 0 | 0 | 961 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 627 | 0 | 0 | 961 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 28.0 | | | 49.0 | | |
| Total Split (%) | 36.4% | | | 63.6% | | |
| Maximum Green (s) | 21.0 | | | 44.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 21.0 | | | 44.0 | | |
| Actuated g/C Ratio | 0.27 | | | 0.57 | | |
| v/c Ratio | 0.69 | | | 0.34 | | |
| Control Delay | 29.9 | | | 9.2 | | |
| Queue Delay | 60.0 | | | 2.2 | | |
| Total Delay | 89.9 | | | 11.4 | | |
| LOS | F | | | B | | |
| Approach Delay | 89.9 | | | 11.4 | | |
| Approach LOS | F | | | B | | |
| Stops (vph) | 522 | | | 453 | | |
| Fuel Used(l) | 28 | | | 23 | | |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|-----|-----|------|------|-----|
| CO Emissions (g/hr) | 514 | | | 421 | | |
| NOx Emissions (g/hr) | 99 | | | 81 | | |
| VOC Emissions (g/hr) | 118 | | | 97 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 44.2 | | | 26.3 | | |
| Queue Length 95th (m) | 62.2 | | | 34.1 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 905 | | | 2809 | | |
| Starvation Cap Reductn | 639 | | | 1656 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 2.36 | | | 0.83 | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 77 |
| Actuated Cycle Length: | 77 |
| Offset: | 4 (5%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 42.4 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 100.6% |
| ICU Level of Service | G |
| Analysis Period (min) | 15 |

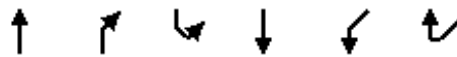
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



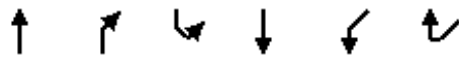
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 0 | 0 | 0 | 1421 | 476 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1421 | 476 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 47.0 | 33.0 | |
| Total Split (%) | | | | 58.8% | 41.3% | |
| Maximum Green (s) | | | | 42.0 | 29.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 4.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 29.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.36 | |
| v/c Ratio | | | | 0.55 | 0.40 | |
| Control Delay | | | | 13.7 | 20.2 | |
| Queue Delay | | | | 50.6 | 0.0 | |
| Total Delay | | | | 64.3 | 20.2 | |
| LOS | | | | E | C | |
| Approach Delay | | | | 64.3 | 20.2 | |
| Approach LOS | | | | E | C | |
| Stops (vph) | | | | 853 | 325 | |
| Fuel Used(l) | | | | 39 | 16 | |

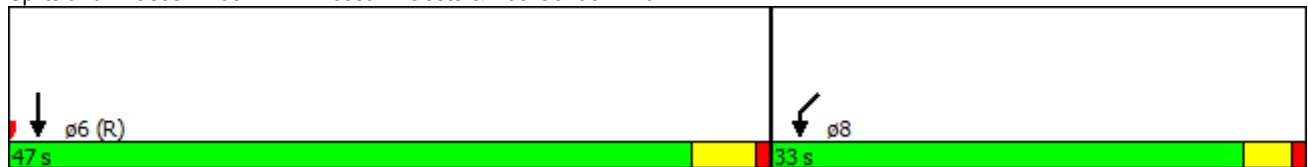


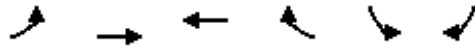
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| CO Emissions (g/hr) | | | | 719 | 293 | |
| NOx Emissions (g/hr) | | | | 139 | 57 | |
| VOC Emissions (g/hr) | | | | 166 | 68 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 52.1 | 28.6 | |
| Queue Length 95th (m) | | | | 64.9 | 41.3 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2580 | 1203 | |
| Starvation Cap Reductn | | | | 1685 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.59 | 0.40 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.55 |
| Intersection Signal Delay: | 53.3 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 46.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu





| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 388 | 4 | 0 | 11 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 392 | 0 | 0 | 11 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 20.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1619 | 0 | 0 | 0 | 0 | 1995 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1619 | 0 | 0 | 0 | 0 | 1995 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 59.0 | | | | | 30.0 |
| Total Split (%) | 66.3% | | | | | 33.7% |
| Maximum Green (s) | 55.0 | | | | | 24.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 55.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.27 |
| v/c Ratio | 0.76 | | | | | 2.14 |
| Control Delay | 15.2 | | | | | 539.9 |
| Queue Delay | 48.9 | | | | | 2.5 |
| Total Delay | 64.1 | | | | | 542.4 |
| LOS | E | | | | | F |
| Approach Delay | 64.1 | | | | | |
| Approach LOS | E | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|-------|-----|-----|------|------|--------|
| Stops (vph) | 1057 | | | | | 1365 |
| Fuel Used(l) | 48 | | | | | 833 |
| CO Emissions (g/hr) | 891 | | | | | 15501 |
| NOx Emissions (g/hr) | 172 | | | | | 2992 |
| VOC Emissions (g/hr) | 206 | | | | | 3575 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 99.6 | | | | | ~253.5 |
| Queue Length 95th (m) | 128.3 | | | | | #290.1 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2135 | | | | | 931 |
| Starvation Cap Reductn | 985 | | | | | 314 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.41 | | | | | 3.23 |

Intersection Summary

Area Type: Other
 Cycle Length: 89
 Actuated Cycle Length: 89
 Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.14
 Intersection Signal Delay: 328.1
 Intersection LOS: F
 Intersection Capacity Utilization 96.0%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Macedo

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1649 | 327 | 0 | 1942 | 0 | 65 | 479 | 112 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3080 | 1351 | 0 | 4677 | 0 | 0 | 3273 | 1500 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3080 | 1351 | 0 | 4677 | 0 | 0 | 3273 | 1500 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 92.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 6.6 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 4% | 2% | 4% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1718 | 341 | 0 | 2023 | 0 | 68 | 499 | 117 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1752 | 307 | 0 | 2023 | 0 | 0 | 567 | 117 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 76.0 | 76.0 | | 73.0 | | 38.0 | 38.0 | 38.0 | | |
| Total Split (%) | | 66.7% | 66.7% | | 64.0% | | 33.3% | 33.3% | 33.3% | | |
| Maximum Green (s) | | 72.0 | 72.0 | | 68.0 | | 33.0 | 33.0 | 33.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 72.0 | 72.0 | | 71.0 | | | 33.0 | 33.0 | | |
| Actuated g/C Ratio | | 0.63 | 0.63 | | 0.62 | | | 0.29 | 0.29 | | |
| v/c Ratio | | 0.90 | 0.36 | | 0.69 | | | 0.60 | 0.27 | | |
| Control Delay | | 25.9 | 11.5 | | 15.9 | | | 38.0 | 33.3 | | |
| Queue Delay | | 0.0 | 0.0 | | 48.2 | | | 0.0 | 0.0 | | |
| Total Delay | | 25.9 | 11.5 | | 64.1 | | | 38.0 | 33.3 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

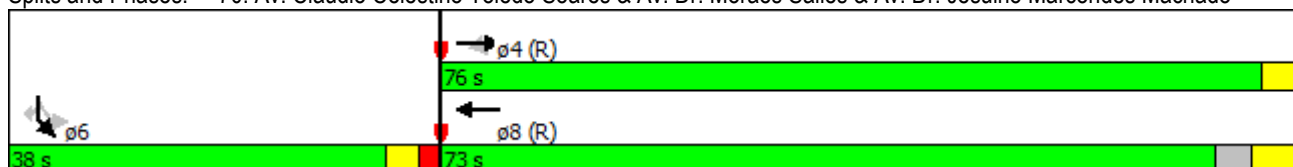


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|-------|------|-----|-------|-----|------|------|------|------|-----|
| LOS | | C | B | | E | | | D | C | | |
| Approach Delay | | 23.8 | | | 64.1 | | | 37.2 | | | |
| Approach LOS | | C | | | E | | | D | | | |
| Stops (vph) | | 1344 | 135 | | 1224 | | | 457 | 84 | | |
| Fuel Used(l) | | 78 | 8 | | 62 | | | 29 | 5 | | |
| CO Emissions (g/hr) | | 1459 | 153 | | 1153 | | | 547 | 101 | | |
| NOx Emissions (g/hr) | | 282 | 30 | | 223 | | | 106 | 19 | | |
| VOC Emissions (g/hr) | | 336 | 35 | | 266 | | | 126 | 23 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | 178.7 | 34.9 | | 107.4 | | | 58.9 | 21.2 | | |
| Queue Length 95th (m) | | 225.9 | 53.9 | | 124.6 | | | 77.6 | 37.4 | | |
| Internal Link Dist (m) | | 68.3 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1945 | 853 | | 2912 | | | 947 | 434 | | |
| Starvation Cap Reductn | | 0 | 0 | | 1380 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 0.90 | 0.36 | | 1.32 | | | 0.60 | 0.27 | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 114 |
| Actuated Cycle Length: | 114 |
| Offset: | 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.90 |
| Intersection Signal Delay: | 42.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 152.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.952 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 580 | 820 | 384 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 580 | 1204 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.997 | | | 0.997 | | | 0.983 | | | 0.915 | |
| Flt Protected | | 0.978 | | | 0.990 | | | 0.990 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 3199 | 0 | 0 | 3037 | 0 |
| Flt Permitted | | 0.978 | | | 0.990 | | | 0.868 | | | 0.922 | |
| Satd. Flow (perm) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 2805 | 0 | 0 | 2812 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 99.0 | | | 99.0 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 7.1 | | | 7.1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 505 | 585 | 24 | 131 | 484 | 14 | 34 | 121 | 20 | 9 | 46 | 72 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1114 | 0 | 0 | 629 | 0 | 0 | 175 | 0 | 0 | 127 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | | 6 |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 19.0 | 19.0 | | 23.0 | 23.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 34.5% | 34.5% | | 41.8% | 41.8% | | 23.6% | 23.6% | | 23.6% | 23.6% | |
| Maximum Green (s) | 13.0 | 13.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 13.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.24 | | | 0.31 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 1.48 | | | 0.63 | | | 0.43 | | | 0.31 | |
| Control Delay | | 245.6 | | | 19.6 | | | 25.1 | | | 23.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 245.6 | | | 19.6 | | | 25.1 | | | 23.4 | |
| LOS | | F | | | B | | | C | | | C | |
| Approach Delay | | 245.6 | | | 19.6 | | | 25.1 | | | 23.4 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

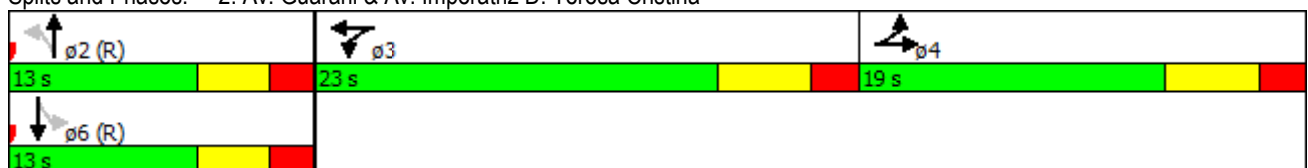


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | F | | | B | | | C | | | C | |
| Stops (vph) | | 873 | | | 491 | | | 146 | | | 105 | |
| Fuel Used(l) | | 240 | | | 41 | | | 8 | | | 6 | |
| CO Emissions (g/hr) | | 4473 | | | 767 | | | 151 | | | 106 | |
| NOx Emissions (g/hr) | | 863 | | | 148 | | | 29 | | | 20 | |
| VOC Emissions (g/hr) | | 1032 | | | 177 | | | 35 | | | 24 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | -88.0 | | | 29.2 | | | 8.9 | | | 6.3 | |
| Queue Length 95th (m) | | #122.4 | | | 44.2 | | | 17.1 | | | 13.1 | |
| Internal Link Dist (m) | | 79.9 | | | 64.6 | | | 75.0 | | | 75.0 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 753 | | | 1005 | | | 408 | | | 409 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 1.48 | | | 0.63 | | | 0.43 | | | 0.31 | |

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 55
 Offset: 45 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 143.4 Intersection LOS: F
 Intersection Capacity Utilization 72.4% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.986 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1400 | 142 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1542 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 32.3% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.993 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 554 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 464 | 931 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 583 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1395 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | | 28.0 | | | | | | | | 42.0 | 42.0 | |
| Total Split (%) | | 40.0% | | | | | | | | 60.0% | 60.0% | |
| Maximum Green (s) | | 21.0 | | | | | | | | 37.0 | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.59 | | | | | | | | | 0.55 | |
| Control Delay | | 23.8 | | | | | | | | | 2.2 | |
| Queue Delay | | 0.0 | | | | | | | | | 1.0 | |
| Total Delay | | 23.8 | | | | | | | | | 3.2 | |
| LOS | | C | | | | | | | | | A | |
| Approach Delay | | 23.8 | | | | | | | | | 3.2 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Approach LOS | | C | | | | | | | | | | A |
| Stops (vph) | | 455 | | | | | | | | | | 77 |
| Fuel Used(l) | | 23 | | | | | | | | | | 10 |
| CO Emissions (g/hr) | | 426 | | | | | | | | | | 182 |
| NOx Emissions (g/hr) | | 82 | | | | | | | | | | 35 |
| VOC Emissions (g/hr) | | 98 | | | | | | | | | | 42 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 35.6 | | | | | | | | | | 3.7 |
| Queue Length 95th (m) | | 51.4 | | | | | | | | | | m8.1 |
| Internal Link Dist (m) | | 22.8 | | | | 7.7 | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 989 | | | | | | | | | | 2548 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 807 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.59 | | | | | | | | | | 0.80 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.59 |
| Intersection Signal Delay: | 9.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 51.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.948 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 709 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1395 | 749 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 709 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2144 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 28.0 | | | | | | | | | 42.0 | |
| Total Split (%) | | 40.0% | | | | | | | | | 60.0% | |
| Maximum Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.71 | | | | | | | | | 0.90dr | |
| Control Delay | | 26.6 | | | | | | | | | 19.4 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.0 | |
| Total Delay | | 26.6 | | | | | | | | | 66.5 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 26.6 | | | | | | | | | 66.5 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|------|-----|------|-----|-----|-----|-------|
| Approach LOS | | C | | | | | | | | | | E |
| Stops (vph) | | 583 | | | | | | | | | | 1649 |
| Fuel Used(l) | | 31 | | | | | | | | | | 81 |
| CO Emissions (g/hr) | | 572 | | | | | | | | | | 1509 |
| NOx Emissions (g/hr) | | 110 | | | | | | | | | | 291 |
| VOC Emissions (g/hr) | | 132 | | | | | | | | | | 348 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 45.4 | | | | | | | | | | 87.1 |
| Queue Length 95th (m) | | 64.1 | | | | | | | | | | 110.4 |
| Internal Link Dist (m) | | 34.2 | | | | 12.6 | | 21.2 | | | | 44.4 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 995 | | | | | | | | | | 2471 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 870 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.71 | | | | | | | | | | 1.34 |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 58 (83%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 56.6
 Intersection LOS: E
 Intersection Capacity Utilization 70.8%
 ICU Level of Service C
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 179 | 1185 | 4 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1589 | 4911 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1589 | 4911 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 211 | 1395 | 5 | 519 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 211 | 1400 | 0 | 519 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 35.0 | | 37.0 |
| Total Split (%) | | 48.6% | | 51.4% |
| Maximum Green (s) | | 30.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 72.0 | 30.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.42 | | 0.44 |
| v/c Ratio | 0.13 | 0.68 | | 0.34 |
| Control Delay | 0.2 | 19.3 | | 13.9 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.2 | 19.3 | | 13.9 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

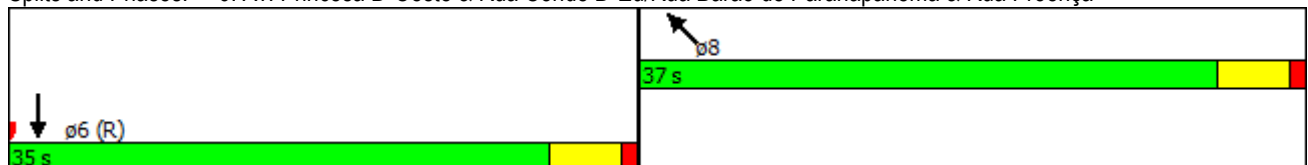


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | B | | B |
| Approach Delay | | 19.3 | | 13.9 |
| Approach LOS | | B | | B |
| Stops (vph) | 0 | 1038 | | 307 |
| Fuel Used(l) | 1 | 61 | | 14 |
| CO Emissions (g/hr) | 14 | 1127 | | 255 |
| NOx Emissions (g/hr) | 3 | 217 | | 49 |
| VOC Emissions (g/hr) | 3 | 260 | | 59 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 57.3 | | 24.3 |
| Queue Length 95th (m) | 0.0 | 72.9 | | 35.4 |
| Internal Link Dist (m) | | 112.1 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1589 | 2046 | | 1505 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.13 | 0.68 | | 0.34 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 72 |
| Actuated Cycle Length: | 72 |
| Offset: | 58 (81%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.68 |
| Intersection Signal Delay: | 16.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 48.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | ↖↗ | | | | | ↖↗↖↗ |
| Volume (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1178 | 0 | 0 | 0 | 0 | 2061 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1178 | 0 | 0 | 0 | 0 | 2061 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 64.0 | | | | | 40.0 |
| Total Split (%) | 61.5% | | | | | 38.5% |
| Maximum Green (s) | 58.0 | | | | | 34.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 58.0 | | | | | 34.0 |
| Actuated g/C Ratio | 0.56 | | | | | 0.33 |
| v/c Ratio | 0.65 | | | | | 1.84 |
| Control Delay | 16.4 | | | | | 408.2 |
| Queue Delay | 8.7 | | | | | 0.3 |
| Total Delay | 25.1 | | | | | 408.5 |
| LOS | C | | | | | F |
| Approach Delay | 25.1 | | | | | |

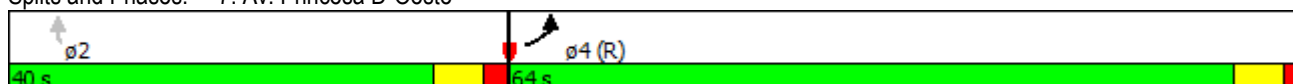


| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|-------|-----|------|--------|-------|-----|
| Approach LOS | C | | | | | |
| Stops (vph) | 750 | | | 1365 | | |
| Fuel Used(l) | 34 | | | 737 | | |
| CO Emissions (g/hr) | 626 | | | 13699 | | |
| NOx Emissions (g/hr) | 121 | | | 2644 | | |
| VOC Emissions (g/hr) | 144 | | | 3160 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 84.4 | | | ~292.9 | | |
| Queue Length 95th (m) | 107.0 | | | #329.7 | | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1815 | | | 1118 | | |
| Starvation Cap Reductn | 0 | | | 0 | | |
| Spillback Cap Reductn | 605 | | | 71 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 0.97 | | | 1.97 | | |

Intersection Summary

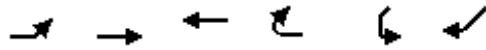
Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 104
 Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.84
 Intersection Signal Delay: 269.1
 Intersection LOS: F
 Intersection Capacity Utilization 88.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 709 | 643 | 0 | 0 | 0 | 749 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 709 | 643 | 0 | 0 | 0 | 749 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.998 | | | 0.986 | | | 0.937 | | | 0.931 | |
| Flt Protected | | 0.981 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1946 | 0 | 0 | 1904 | 0 |
| Flt Permitted | | 0.981 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1946 | 0 | 0 | 1904 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 197 | 307 | 8 | 84 | 211 | 34 | 6 | 312 | 278 | 31 | 225 | 264 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 512 | 0 | 0 | 329 | 0 | 0 | 596 | 0 | 0 | 520 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 95.8% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 381 | 428 | 378 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.930 | |
| Flt Protected | | | | | 0.974 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1746 | 3179 | 0 |
| Flt Permitted | | | | | 0.974 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1746 | 3179 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 259.2 | | 40.3 | |
| Travel Time (s) | 2.3 | | 18.7 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 448 | 504 | 445 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 448 | 949 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.6% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑↑ | | ↑↑↑↑ |
| Volume (vph) | 260 | 1187 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4703 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4703 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 193.3 | | 63.1 |
| Travel Time (s) | | 13.9 | | 4.5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 306 | 1397 | 34 | 1829 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 306 | 1431 | 0 | 1829 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 59.0 | 46.0 | | 53.0 |
| Total Split (%) | 56.2% | 43.8% | | 50.5% |
| Maximum Green (s) | 55.0 | 40.0 | | 48.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 55.0 | 40.0 | | 54.0 |
| Actuated g/C Ratio | 0.52 | 0.38 | | 0.51 |
| v/c Ratio | 0.17 | 0.80 | | 0.75 |
| Control Delay | 13.4 | 33.1 | | 22.8 |
| Queue Delay | 62.5 | 0.0 | | 48.7 |
| Total Delay | 75.9 | 33.1 | | 71.4 |
| LOS | E | C | | E |
| Approach Delay | | 33.1 | | 71.4 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

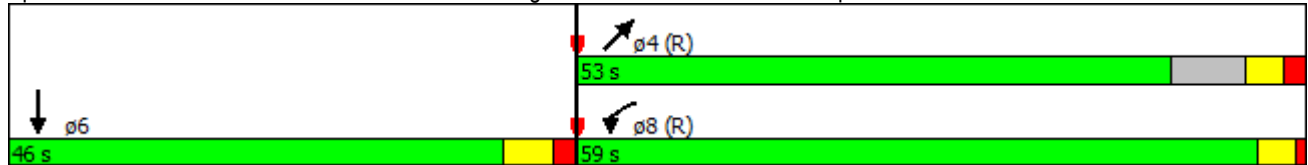


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|-------|------|-------|
| Approach LOS | | C | | E |
| Stops (vph) | 146 | 1183 | | 1335 |
| Fuel Used(l) | 7 | 87 | | 71 |
| CO Emissions (g/hr) | 134 | 1613 | | 1324 |
| NOx Emissions (g/hr) | 26 | 311 | | 256 |
| VOC Emissions (g/hr) | 31 | 372 | | 305 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 17.0 | 98.8 | | 109.4 |
| Queue Length 95th (m) | 24.6 | 118.3 | | 129.1 |
| Internal Link Dist (m) | | 169.3 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1755 | 1791 | | 2425 |
| Starvation Cap Reductn | 1512 | 0 | | 1186 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.26 | 0.80 | | 1.48 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 105 |
| Actuated Cycle Length: | 105 |
| Offset: | 50 (48%), Referenced to phase 4:NET and 8:WBL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.80 |
| Intersection Signal Delay: | 56.4 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 81.5% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

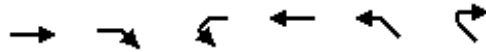
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



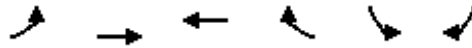
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 497 | 336 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.939 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3219 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3219 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 585 | 396 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 981 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 106 | 211 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 106 | 211 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 524 | 106 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 524 | 106 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.969 | | | | |
| Flt Protected | | 0.996 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.996 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 80 | 938 | 0 | 0 | 0 | 0 | 0 | 1006 | 266 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1018 | 0 | 0 | 0 | 0 | 0 | 1272 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 58.0 | | | | |
| Total Split (%) | 26.6% | 26.6% | | | | | | 73.4% | | | | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 53.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 5.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 53.0 | | | | |
| Actuated g/C Ratio | | 0.20 | | | | | | 0.67 | | | | |
| v/c Ratio | | 1.48 | | | | | | 0.42 | | | | |
| Control Delay | | 249.3 | | | | | | 6.5 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 249.3 | | | | | | 6.5 | | | | |
| LOS | | F | | | | | | A | | | | |
| Approach Delay | | 249.3 | | | | | | 6.5 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | F | | | | | | A | | | | |
| Stops (vph) | | 759 | | | | | | 504 | | | | |
| Fuel Used(l) | | 207 | | | | | | 21 | | | | |
| CO Emissions (g/hr) | | 3857 | | | | | | 382 | | | | |
| NOx Emissions (g/hr) | | 744 | | | | | | 74 | | | | |
| VOC Emissions (g/hr) | | 890 | | | | | | 88 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | ~118.1 | | | | | | 28.8 | | | | |
| Queue Length 95th (m) | | #156.2 | | | | | | 36.5 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 690 | | | | | | 3029 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 1.48 | | | | | | 0.42 | | | | |

Intersection Summary

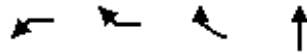
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 79 |
| Actuated Cycle Length: | 79 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.48 |
| Intersection Signal Delay: | 114.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 59.8% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

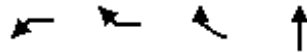


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 457 | 441 | 292 | 1525 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.935 | 0.850 | | |
| Flt Protected | 0.973 | | | |
| Satd. Flow (prot) | 3165 | 1373 | 0 | 4916 |
| Flt Permitted | 0.973 | | | |
| Satd. Flow (perm) | 3165 | 1373 | 0 | 4916 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 538 | 519 | 344 | 1795 |
| Shared Lane Traffic (%) | | 80% | | |
| Lane Group Flow (vph) | 953 | 448 | 0 | 1795 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 43.0 | 43.0 | | 30.0 |
| Total Split (%) | 58.9% | 58.9% | | 41.1% |
| Maximum Green (s) | 38.0 | 38.0 | | 25.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 38.0 | 38.0 | | 25.0 |
| Actuated g/C Ratio | 0.52 | 0.52 | | 0.34 |
| v/c Ratio | 0.58 | 0.63 | | 1.07 |
| Control Delay | 13.8 | 17.4 | | 67.6 |
| Queue Delay | 0.0 | 0.0 | | 15.4 |
| Total Delay | 13.8 | 17.4 | | 83.0 |
| LOS | B | B | | F |
| Approach Delay | 14.9 | | | 83.0 |

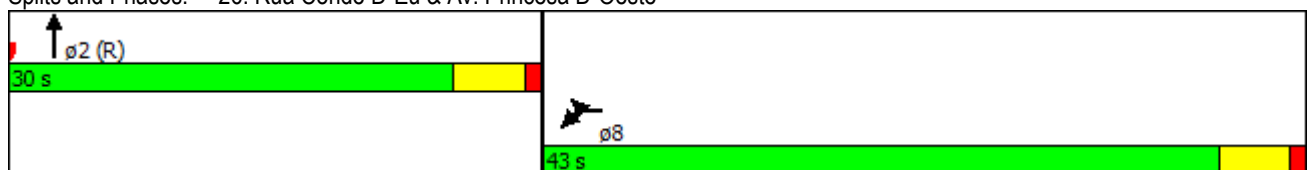


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|--------|
| Approach LOS | B | | | F |
| Stops (vph) | 590 | 299 | | 1484 |
| Fuel Used(l) | 32 | 17 | | 134 |
| CO Emissions (g/hr) | 601 | 314 | | 2494 |
| NOx Emissions (g/hr) | 116 | 61 | | 481 |
| VOC Emissions (g/hr) | 139 | 72 | | 575 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 45.3 | 47.1 | | ~107.1 |
| Queue Length 95th (m) | 62.4 | 81.0 | | #136.4 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1647 | 714 | | 1683 |
| Starvation Cap Reductn | 0 | 0 | | 573 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.58 | 0.63 | | 1.62 |

Intersection Summary

Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 73
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 53.1
 Intersection LOS: D
 Intersection Capacity Utilization 77.5%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1178 | 1542 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1178 | 1542 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 96.0 | 96.0 | 8.0 |
| Total Split (%) | | | | | 92.3% | 92.3% | 8% |
| Maximum Green (s) | | | | | 90.0 | 90.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 90.0 | 90.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.43 | 0.38 | |
| Control Delay | | | | | 2.0 | 1.7 | |
| Queue Delay | | | | | 2.0 | 1.2 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 4.0 | 2.8 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 3.3 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 195 | 237 | |
| Fuel Used(l) | | | | | 15 | 19 | |
| CO Emissions (g/hr) | | | | | 278 | 349 | |
| NOx Emissions (g/hr) | | | | | 54 | 67 | |
| VOC Emissions (g/hr) | | | | | 64 | 81 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 17.2 | 14.8 | |
| Queue Length 95th (m) | | | | | 21.7 | 17.8 | |
| Internal Link Dist (m) | 0.1 | | 254.1 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2760 | 4088 | |
| Starvation Cap Reductn | | | | | 1373 | 2195 | |
| Spillback Cap Reductn | | | | | 872 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.85 | 0.81 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.43 |
| Intersection Signal Delay: | 3.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 61.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 1714 | 0 | 0 | 1650 | 262 | 292 | 733 | 66 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Flt | | | | | 0.979 | | | 0.999 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 6% | 2% | 2% | 4% | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2018 | 0 | 0 | 1942 | 308 | 344 | 863 | 78 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 2018 | 0 | 0 | 2250 | 0 | 344 | 871 | 70 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 73.0 | | | 68.0 | | 37.0 | 37.0 | 37.0 | | |
| Total Split (%) | | 66.4% | | | 61.8% | | 33.6% | 33.6% | 33.6% | | |
| Maximum Green (s) | | 68.0 | | | 64.0 | | 32.0 | 32.0 | 32.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 68.0 | | | 69.0 | | 32.0 | 32.0 | 32.0 | | |
| Actuated g/C Ratio | | 0.62 | | | 0.63 | | 0.29 | 0.29 | 0.29 | | |
| v/c Ratio | | 0.71 | | | 0.78 | | 0.69 | 1.75 | 0.17 | | |
| Control Delay | | 16.1 | | | 17.4 | | 43.1 | 372.7 | 30.4 | | |
| Queue Delay | | 48.1 | | | 0.0 | | 69.5 | 5.5 | 94.3 | | |
| Total Delay | | 64.2 | | | 17.4 | | 112.6 | 378.2 | 124.8 | | |
| LOS | | E | | | B | | F | F | F | | |
| Approach Delay | | 64.2 | | | 17.4 | | | 293.3 | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|-------|-----|-----|-------|-----|-------|--------|------|------|-----|
| Approach LOS | | E | | | B | | | F | | | |
| Stops (vph) | | 1251 | | | 1499 | | 289 | 581 | 49 | | |
| Fuel Used(l) | | 63 | | | 103 | | 19 | 256 | 3 | | |
| CO Emissions (g/hr) | | 1168 | | | 1918 | | 346 | 4758 | 54 | | |
| NOx Emissions (g/hr) | | 226 | | | 370 | | 67 | 918 | 10 | | |
| VOC Emissions (g/hr) | | 269 | | | 442 | | 80 | 1097 | 12 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | 105.5 | | | 125.7 | | 68.9 | ~293.0 | 12.4 | | |
| Queue Length 95th (m) | | 123.6 | | | 146.4 | | 102.8 | #369.9 | 24.8 | | |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 13.6 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2836 | | | 2883 | | 497 | 498 | 422 | | |
| Starvation Cap Reductn | | 1310 | | | 0 | | 359 | 209 | 365 | | |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 1.32 | | | 0.78 | | 2.49 | 3.01 | 1.23 | | |

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 120

Control Type: Pretimed

Maximum v/c Ratio: 1.75

Intersection Signal Delay: 98.3

Intersection LOS: F

Intersection Capacity Utilization 171.0%

ICU Level of Service H

Analysis Period (min) 15

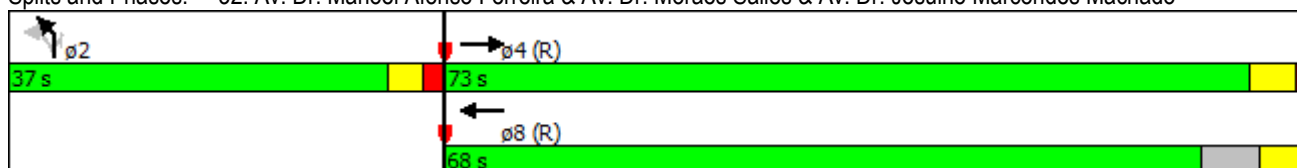
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↑↕ | |
| Volume (vph) | 326 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 761 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frnt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.971 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Flt Permitted | | 0.971 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3296 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 155.6 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 11.2 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 384 | 259 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 896 | 66 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 643 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 962 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 85.0 | 85.0 | | | | | | | | 26.0 | |
| Total Split (%) | 76.6% | 76.6% | | | | | | | | 23.4% | |
| Maximum Green (s) | 81.0 | 81.0 | | | | | | | | 22.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 4.0 | | | | | | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 81.0 | | | | | | | | 22.0 | |
| Actuated g/C Ratio | | 0.73 | | | | | | | | 0.20 | |
| v/c Ratio | | 0.27 | | | | | | | | 1.84 | |
| Control Delay | | 5.4 | | | | | | | | 413.1 | |
| Queue Delay | | 0.0 | | | | | | | | 0.0 | |
| Total Delay | | 5.4 | | | | | | | | 413.1 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 5.4 | | | | | | | | | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

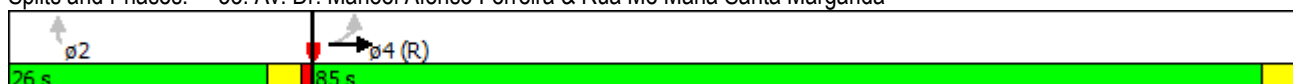


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|------------------------|-----|------|-----|-----|------|-----|------|-----|-------|--------|------|
| Approach LOS | | A | | | | | | | | | |
| Stops (vph) | | 189 | | | | | | | | 633 | |
| Fuel Used(l) | | 8 | | | | | | | | 322 | |
| CO Emissions (g/hr) | | 146 | | | | | | | | 5982 | |
| NOx Emissions (g/hr) | | 28 | | | | | | | | 1155 | |
| VOC Emissions (g/hr) | | 34 | | | | | | | | 1380 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | |
| Queue Length 50th (m) | | 22.4 | | | | | | | | ~189.3 | |
| Queue Length 95th (m) | | 29.3 | | | | | | | | #234.2 | |
| Internal Link Dist (m) | | 0.1 | | | 49.4 | | 13.6 | | 131.6 | | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2405 | | | | | | | | 523 | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | |
| Spillback Cap Reductn | | 0 | | | | | | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.27 | | | | | | | | 1.84 | |

Intersection Summary

| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 111 |
| Actuated Cycle Length: | 111 |
| Offset: | 46 (41%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.84 |
| Intersection Signal Delay: | 249.8 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 59.4% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 656 | 0 | 995 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 208.9 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.0 | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 772 | 0 | 1171 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 772 | 0 | 1171 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

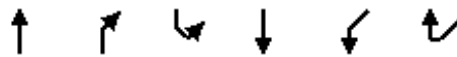
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

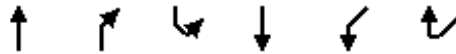
Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2109 | 1130 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3239 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 96.0 | | | | | | 8.0 |
| Total Split (%) | 92.3% | | | | | | 8% |
| Maximum Green (s) | 90.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 90.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 0.86dr | | | | | | |
| Control Delay | 8.2 | | | | | | |
| Queue Delay | 46.6 | | | | | | |
| Total Delay | 54.8 | | | | | | |
| LOS | D | | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|-----|------|------|-----|-----|
| Approach Delay | 54.8 | | | | | | |
| Approach LOS | D | | | | | | |
| Stops (vph) | 1695 | | | | | | |
| Fuel Used(l) | 77 | | | | | | |
| CO Emissions (g/hr) | 1440 | | | | | | |
| NOx Emissions (g/hr) | 278 | | | | | | |
| VOC Emissions (g/hr) | 332 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 56.3 | | | | | | |
| Queue Length 95th (m) | m22.0 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 3964 | | | | | | |
| Starvation Cap Reductn | 1353 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.24 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 104
 Offset: 32 (31%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 54.8
 Intersection LOS: D
 Intersection Capacity Utilization 68.4%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr t | | | | | 0.993 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 306 | 145 | 0 | 2109 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 10% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 321 | 130 | 0 | 2109 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 30.0 | 30.0 | | | | |
| Total Split (%) | | | | | 33.3% | 33.3% | 66.7% | 66.7% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 24.0 | 24.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 24.0 | | | | |
| Actuated g/C Ratio | | | | | 0.22 | 0.22 | | 0.53 | | | | |
| v/c Ratio | | | | | 0.45 | 0.43 | | 0.81 | | | | |
| Control Delay | | | | | 17.4 | 20.2 | | 12.1 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 47.3 | | | | |
| Total Delay | | | | | 17.4 | 20.2 | | 59.4 | | | | |
| LOS | | | | | B | C | | E | | | | |
| Approach Delay | | | | | 18.2 | | | 59.4 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|-----|
| Approach LOS | | | | | B | | | E | | | | |
| Stops (vph) | | | | | 249 | 104 | | 1486 | | | | |
| Fuel Used(l) | | | | | 12 | 5 | | 64 | | | | |
| CO Emissions (g/hr) | | | | | 219 | 95 | | 1195 | | | | |
| NOx Emissions (g/hr) | | | | | 42 | 18 | | 231 | | | | |
| VOC Emissions (g/hr) | | | | | 50 | 22 | | 276 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 12.6 | 10.2 | | 45.4 | | | | |
| Queue Length 95th (m) | | | | | 22.3 | 23.6 | | 63.3 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 719 | 304 | | 2594 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 866 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.45 | 0.43 | | 1.22 | | | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 45 |
| Offset: | 5 (11%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 52.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 68.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 725 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.948 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1542 | 3239 | 1658 | 4456 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1542 | 3239 | 1658 | 4456 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 213.6 | |
| Travel Time (s) | | 2.4 | | 15.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 211 | 454 | 815 | 1618 | 853 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 190 | 475 | 815 | 2471 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.64 | 0.76 | 0.66 | 0.74 | |
| Control Delay | 63.0 | 62.4 | 11.7 | 11.5 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|-------|-------|-----|
| Total Delay | 63.0 | 62.4 | 11.7 | 11.5 | |
| LOS | E | E | B | B | |
| Approach Delay | | 62.6 | | 11.6 | |
| Approach LOS | | E | | B | |
| Stops (vph) | 168 | 424 | 369 | 1249 | |
| Fuel Used(l) | 13 | 33 | 31 | 97 | |
| CO Emissions (g/hr) | 245 | 611 | 580 | 1808 | |
| NOx Emissions (g/hr) | 47 | 118 | 112 | 349 | |
| VOC Emissions (g/hr) | 56 | 141 | 134 | 417 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 56.5 | 72.7 | 103.5 | 131.0 | |
| Queue Length 95th (m) | 87.4 | 94.5 | 142.7 | 147.0 | |
| Internal Link Dist (m) | | 9.3 | | 189.6 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 297 | 624 | 1243 | 3342 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.64 | 0.76 | 0.66 | 0.74 | |

Intersection Summary

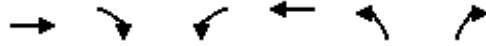
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 24 (17%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.76 |
| Intersection Signal Delay: | 20.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 67.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019



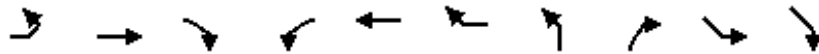
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.996 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1269 | 39 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1308 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Colombo



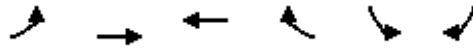
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2 | 32 | 815 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2 | 32 | 815 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 663 | 0 | 0 | 2 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 663 | 0 | 0 | 2 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 47.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr _t | | 0.850 | | | 0.978 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1269 | 0 | 0 | 1451 | 252 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1269 | 0 | 0 | 1703 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 59.0 | | | 63.0 | | | |
| Total Split (%) | | 48.4% | | | 51.6% | | | |
| Maximum Green (s) | | 55.0 | | | 59.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 55.0 | | | 59.0 | | | |
| Actuated g/C Ratio | | 0.45 | | | 0.48 | | | |
| v/c Ratio | | 0.81 | | | 0.76 | | | |
| Control Delay | | 34.3 | | | 28.4 | | | |
| Queue Delay | | 0.0 | | | 49.2 | | | |
| Total Delay | | 34.3 | | | 77.6 | | | |
| LOS | | C | | | E | | | |
| Approach Delay | | | | | 77.6 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

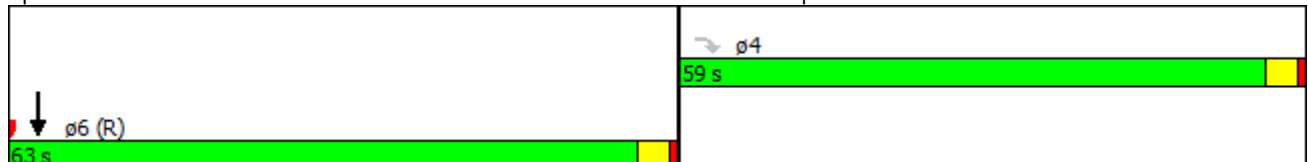


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|-------|-----|------|-------|-----|------|-----|
| Approach LOS | | | | | E | | | |
| Stops (vph) | | 1030 | | | 1289 | | | |
| Fuel Used(l) | | 60 | | | 74 | | | |
| CO Emissions (g/hr) | | 1115 | | | 1372 | | | |
| NOx Emissions (g/hr) | | 215 | | | 265 | | | |
| VOC Emissions (g/hr) | | 257 | | | 316 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 119.2 | | | 124.8 | | | |
| Queue Length 95th (m) | | 144.6 | | | 144.6 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1558 | | | 2247 | | | |
| Starvation Cap Reductn | | 0 | | | 1161 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.81 | | | 1.57 | | | |

Intersection Summary

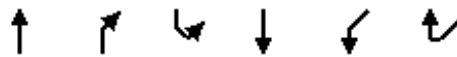
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 122 |
| Actuated Cycle Length: | 122 |
| Offset: | 112 (92%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 59.1 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 67.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 39 | 252 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 39 | 252 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 23.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 128.3 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.2 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 40 | 1272 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1312 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 136.8 | | | 22.0 |
| Travel Time (s) | 2.4 | | 9.8 | | | 1.6 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 40 | 0 | 0 | 0 | 0 | 1019 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 40 | 0 | 0 | 0 | 0 | 1019 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 709 | 0 | 0 | 1086 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 709 | 0 | 0 | 1086 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 28.0 | | | 49.0 | | |
| Total Split (%) | 36.4% | | | 63.6% | | |
| Maximum Green (s) | 21.0 | | | 44.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 21.0 | | | 44.0 | | |
| Actuated g/C Ratio | 0.27 | | | 0.57 | | |
| v/c Ratio | 0.78 | | | 0.39 | | |
| Control Delay | 33.3 | | | 9.6 | | |
| Queue Delay | 58.3 | | | 3.5 | | |
| Total Delay | 91.6 | | | 13.1 | | |
| LOS | F | | | B | | |
| Approach Delay | 91.6 | | | 13.1 | | |
| Approach LOS | F | | | B | | |
| Stops (vph) | 602 | | | 529 | | |

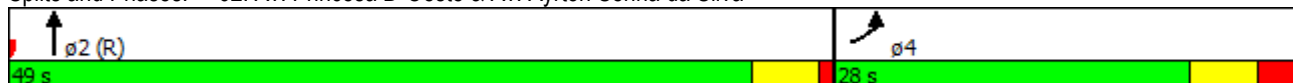


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|-------|-----|-----|------|------|-----|
| Fuel Used(l) | 33 | | | 26 | | |
| CO Emissions (g/hr) | 619 | | | 488 | | |
| NOx Emissions (g/hr) | 120 | | | 94 | | |
| VOC Emissions (g/hr) | 143 | | | 113 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 51.7 | | | 30.6 | | |
| Queue Length 95th (m) | #71.8 | | | 39.3 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 905 | | | 2809 | | |
| Starvation Cap Reductn | 618 | | | 1599 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 2.47 | | | 0.90 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 77
 Actuated Cycle Length: 77
 Offset: 4 (5%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 44.1 Intersection LOS: D
 Intersection Capacity Utilization 112.2% ICU Level of Service H
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

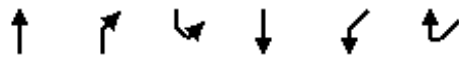
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



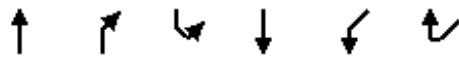
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1606 | 538 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1606 | 538 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 47.0 | 33.0 | |
| Total Split (%) | | | | 58.8% | 41.3% | |
| Maximum Green (s) | | | | 42.0 | 29.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 4.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 29.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.36 | |
| v/c Ratio | | | | 0.62 | 0.45 | |
| Control Delay | | | | 14.8 | 20.9 | |
| Queue Delay | | | | 50.0 | 0.0 | |
| Total Delay | | | | 64.8 | 20.9 | |
| LOS | | | | E | C | |
| Approach Delay | | | | 64.8 | 20.9 | |
| Approach LOS | | | | E | C | |
| Stops (vph) | | | | 1022 | 376 | |

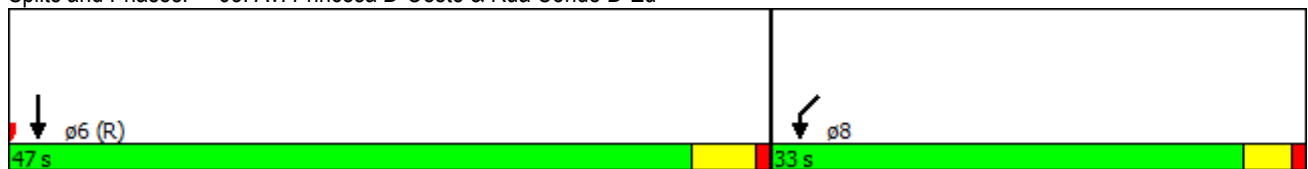


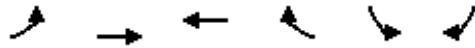
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | | | | 46 | 18 | |
| CO Emissions (g/hr) | | | | 860 | 340 | |
| NOx Emissions (g/hr) | | | | 166 | 66 | |
| VOC Emissions (g/hr) | | | | 198 | 78 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 62.1 | 33.1 | |
| Queue Length 95th (m) | | | | 76.7 | 47.0 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2580 | 1203 | |
| Starvation Cap Reductn | | | | 1589 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.62 | 0.45 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.62 |
| Intersection Signal Delay: | 53.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 52.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu





| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 438 | 5 | 0 | 13 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 443 | 0 | 0 | 13 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 21.8% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1829 | 0 | 0 | 0 | 0 | 2254 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1829 | 0 | 0 | 0 | 0 | 2254 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 59.0 | | | | | 30.0 |
| Total Split (%) | 66.3% | | | | | 33.7% |
| Maximum Green (s) | 55.0 | | | | | 24.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 55.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.27 |
| v/c Ratio | 0.86 | | | | | 2.42 |
| Control Delay | 19.1 | | | | | 662.8 |
| Queue Delay | 47.8 | | | | | 1.8 |
| Total Delay | 66.9 | | | | | 664.7 |
| LOS | E | | | | | F |
| Approach Delay | 66.9 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|-------|-----|-----|------|------|--------|
| Approach LOS | E | | | | | |
| Stops (vph) | 1342 | | | | | 1572 |
| Fuel Used(l) | 63 | | | | | 1147 |
| CO Emissions (g/hr) | 1168 | | | | | 21337 |
| NOx Emissions (g/hr) | 225 | | | | | 4118 |
| VOC Emissions (g/hr) | 269 | | | | | 4921 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 127.4 | | | | | ~296.4 |
| Queue Length 95th (m) | 164.9 | | | | | #333.2 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2135 | | | | | 931 |
| Starvation Cap Reductn | 862 | | | | | 251 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.44 | | | | | 3.31 |

Intersection Summary

Area Type: Other
 Cycle Length: 89
 Actuated Cycle Length: 89
 Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.42
 Intersection Signal Delay: 396.9
 Intersection LOS: F
 Intersection Capacity Utilization 107.3%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Moraes Machado

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1649 | 327 | 0 | 1942 | 0 | 65 | 479 | 112 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3081 | 1351 | 0 | 4677 | 0 | 0 | 3273 | 1500 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3081 | 1351 | 0 | 4677 | 0 | 0 | 3273 | 1500 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 92.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 6.6 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 4% | 2% | 4% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1941 | 385 | 0 | 2286 | 0 | 77 | 564 | 132 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1980 | 346 | 0 | 2286 | 0 | 0 | 641 | 132 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 76.0 | 76.0 | | 73.0 | | 38.0 | 38.0 | 38.0 | | |
| Total Split (%) | | 66.7% | 66.7% | | 64.0% | | 33.3% | 33.3% | 33.3% | | |
| Maximum Green (s) | | 72.0 | 72.0 | | 68.0 | | 33.0 | 33.0 | 33.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 72.0 | 72.0 | | 71.0 | | | 33.0 | 33.0 | | |
| Actuated g/C Ratio | | 0.63 | 0.63 | | 0.62 | | | 0.29 | 0.29 | | |
| v/c Ratio | | 1.02 | 0.41 | | 0.79 | | | 0.68 | 0.30 | | |
| Control Delay | | 46.8 | 12.2 | | 18.4 | | | 40.1 | 34.0 | | |
| Queue Delay | | 0.0 | 0.0 | | 47.6 | | | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

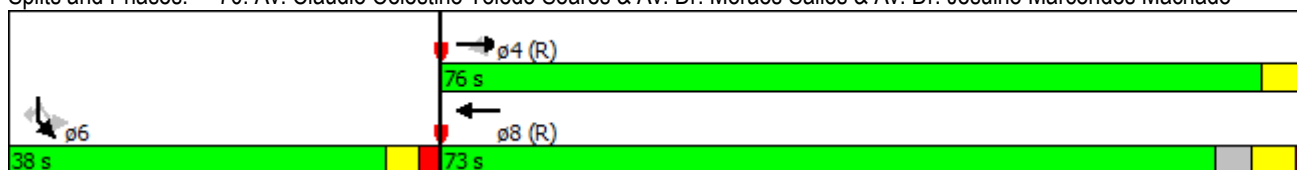


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|------|-----|-------|-----|------|------|------|------|-----|
| Total Delay | | 46.8 | 12.2 | | 66.0 | | | 40.1 | 34.0 | | |
| LOS | | D | B | | E | | | D | C | | |
| Approach Delay | | 41.7 | | | 66.0 | | | 39.0 | | | |
| Approach LOS | | D | | | E | | | D | | | |
| Stops (vph) | | 1604 | 157 | | 1544 | | | 531 | 97 | | |
| Fuel Used(l) | | 121 | 10 | | 78 | | | 35 | 6 | | |
| CO Emissions (g/hr) | | 2252 | 177 | | 1448 | | | 643 | 116 | | |
| NOx Emissions (g/hr) | | 435 | 34 | | 280 | | | 124 | 22 | | |
| VOC Emissions (g/hr) | | 519 | 41 | | 334 | | | 148 | 27 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~255.8 | 40.9 | | 134.7 | | | 68.5 | 24.1 | | |
| Queue Length 95th (m) | | #316.8 | 62.6 | | 155.9 | | | 89.1 | 41.6 | | |
| Internal Link Dist (m) | | 68.3 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1945 | 853 | | 2912 | | | 947 | 434 | | |
| Starvation Cap Reductn | | 0 | 0 | | 1234 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.02 | 0.41 | | 1.36 | | | 0.68 | 0.30 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 114
 Actuated Cycle Length: 114
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 51.6
 Intersection LOS: D
 Intersection Capacity Utilization 171.0%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.952 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 580 | 820 | 384 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 580 | 1204 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.997 | | | 0.997 | | | 0.983 | | | 0.915 | |
| Flt Protected | | 0.978 | | | 0.990 | | | 0.990 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 3199 | 0 | 0 | 3037 | 0 |
| Flt Permitted | | 0.978 | | | 0.990 | | | 0.868 | | | 0.922 | |
| Satd. Flow (perm) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 2805 | 0 | 0 | 2812 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 99.0 | | | 99.0 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 7.1 | | | 7.1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 505 | 585 | 24 | 131 | 484 | 14 | 34 | 121 | 20 | 9 | 46 | 72 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1114 | 0 | 0 | 629 | 0 | 0 | 175 | 0 | 0 | 127 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 19.0 | 19.0 | | 23.0 | 23.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 34.5% | 34.5% | | 41.8% | 41.8% | | 23.6% | 23.6% | | 23.6% | 23.6% | |
| Maximum Green (s) | 13.0 | 13.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 13.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.24 | | | 0.31 | | | 0.15 | | | 0.15 | |
| v/c Ratio | | 1.48 | | | 0.63 | | | 0.43 | | | 0.31 | |
| Control Delay | | 245.6 | | | 19.6 | | | 25.1 | | | 23.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 245.6 | | | 19.6 | | | 25.1 | | | 23.4 | |
| LOS | | F | | | B | | | C | | | C | |
| Approach Delay | | 245.6 | | | 19.6 | | | 25.1 | | | 23.4 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

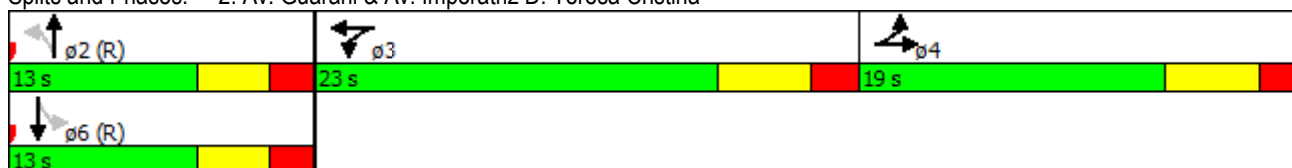


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | F | | | B | | | C | | | C | |
| Stops (vph) | | 873 | | | 491 | | | 146 | | | 105 | |
| Fuel Used(l) | | 240 | | | 41 | | | 8 | | | 6 | |
| CO Emissions (g/hr) | | 4473 | | | 767 | | | 151 | | | 106 | |
| NOx Emissions (g/hr) | | 863 | | | 148 | | | 29 | | | 20 | |
| VOC Emissions (g/hr) | | 1032 | | | 177 | | | 35 | | | 24 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | -88.0 | | | 29.2 | | | 8.9 | | | 6.3 | |
| Queue Length 95th (m) | | #122.4 | | | 44.2 | | | 17.1 | | | 13.1 | |
| Internal Link Dist (m) | | 79.9 | | | 64.6 | | | 75.0 | | | 75.0 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 753 | | | 1005 | | | 408 | | | 409 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 1.48 | | | 0.63 | | | 0.43 | | | 0.31 | |

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 55
 Offset: 45 (82%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 143.4 Intersection LOS: F
 Intersection Capacity Utilization 72.4% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.986 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1400 | 142 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1542 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 32.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.993 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 554 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 464 | 931 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 583 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1395 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | | 28.0 | | | | | | | | 42.0 | 42.0 | |
| Total Split (%) | | 40.0% | | | | | | | | 60.0% | 60.0% | |
| Maximum Green (s) | | 21.0 | | | | | | | | 37.0 | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.59 | | | | | | | | | 0.55 | |
| Control Delay | | 23.8 | | | | | | | | | 2.2 | |
| Queue Delay | | 0.0 | | | | | | | | | 1.0 | |
| Total Delay | | 23.8 | | | | | | | | | 3.2 | |
| LOS | | C | | | | | | | | | A | |
| Approach Delay | | 23.8 | | | | | | | | | 3.2 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Approach LOS | | C | | | | | | | | | | A |
| Stops (vph) | | 455 | | | | | | | | | | 77 |
| Fuel Used(l) | | 23 | | | | | | | | | | 10 |
| CO Emissions (g/hr) | | 426 | | | | | | | | | | 182 |
| NOx Emissions (g/hr) | | 82 | | | | | | | | | | 35 |
| VOC Emissions (g/hr) | | 98 | | | | | | | | | | 42 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 35.6 | | | | | | | | | | 3.7 |
| Queue Length 95th (m) | | 51.4 | | | | | | | | | | m8.1 |
| Internal Link Dist (m) | | 22.8 | | | | 7.7 | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 989 | | | | | | | | | | 2548 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 807 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.59 | | | | | | | | | | 0.80 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 58 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.59 |
| Intersection Signal Delay: | 9.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 51.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.948 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 709 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1395 | 749 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 709 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2144 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 28.0 | | | | | | | | | 42.0 | |
| Total Split (%) | | 40.0% | | | | | | | | | 60.0% | |
| Maximum Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 21.0 | | | | | | | | | 37.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.71 | | | | | | | | | 0.90dr | |
| Control Delay | | 26.6 | | | | | | | | | 19.4 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.0 | |
| Total Delay | | 26.6 | | | | | | | | | 66.5 | |
| LOS | | C | | | | | | | | | E | |
| Approach Delay | | 26.6 | | | | | | | | | 66.5 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|------|-----|------|-----|-----|-----|-------|
| Approach LOS | | C | | | | | | | | | | E |
| Stops (vph) | | 583 | | | | | | | | | | 1649 |
| Fuel Used(l) | | 31 | | | | | | | | | | 81 |
| CO Emissions (g/hr) | | 572 | | | | | | | | | | 1509 |
| NOx Emissions (g/hr) | | 110 | | | | | | | | | | 291 |
| VOC Emissions (g/hr) | | 132 | | | | | | | | | | 348 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 45.4 | | | | | | | | | | 87.1 |
| Queue Length 95th (m) | | 64.1 | | | | | | | | | | 110.4 |
| Internal Link Dist (m) | | 34.2 | | | | 12.6 | | 21.2 | | | | 44.4 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 995 | | | | | | | | | | 2471 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 870 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.71 | | | | | | | | | | 1.34 |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 58 (83%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 56.6 Intersection LOS: E
 Intersection Capacity Utilization 70.8% ICU Level of Service C
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑↑ | | ↑↑ |
| Volume (vph) | 179 | 1185 | 4 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1589 | 4911 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1589 | 4911 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 211 | 1395 | 5 | 519 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 211 | 1400 | 0 | 519 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 35.0 | | 37.0 |
| Total Split (%) | | 48.6% | | 51.4% |
| Maximum Green (s) | | 30.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 72.0 | 30.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.42 | | 0.44 |
| v/c Ratio | 0.13 | 0.68 | | 0.34 |
| Control Delay | 0.2 | 19.3 | | 13.9 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.2 | 19.3 | | 13.9 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

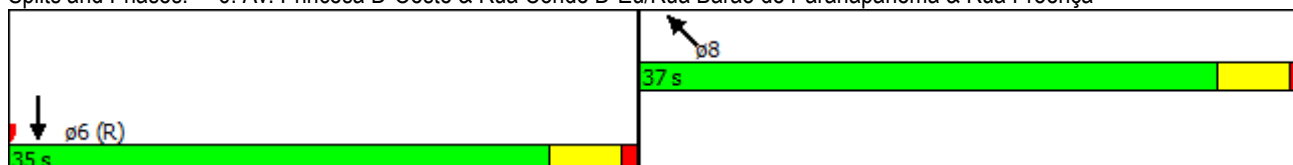


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | B | | B |
| Approach Delay | | 19.3 | | 13.9 |
| Approach LOS | | B | | B |
| Stops (vph) | 0 | 1038 | | 307 |
| Fuel Used(l) | 1 | 61 | | 14 |
| CO Emissions (g/hr) | 14 | 1127 | | 255 |
| NOx Emissions (g/hr) | 3 | 217 | | 49 |
| VOC Emissions (g/hr) | 3 | 260 | | 59 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 57.3 | | 24.3 |
| Queue Length 95th (m) | 0.0 | 72.9 | | 35.4 |
| Internal Link Dist (m) | | 112.1 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1589 | 2046 | | 1505 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.13 | 0.68 | | 0.34 |

Intersection Summary

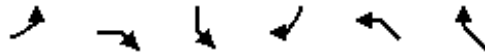
| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 72 |
| Actuated Cycle Length: | 72 |
| Offset: | 58 (81%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.68 |
| Intersection Signal Delay: | 16.1 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 48.1% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1178 | 0 | 0 | 0 | 0 | 2061 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1178 | 0 | 0 | 0 | 0 | 2061 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 64.0 | | | | | 40.0 |
| Total Split (%) | 61.5% | | | | | 38.5% |
| Maximum Green (s) | 58.0 | | | | | 34.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 58.0 | | | | | 34.0 |
| Actuated g/C Ratio | 0.56 | | | | | 0.33 |
| v/c Ratio | 0.65 | | | | | 1.84 |
| Control Delay | 16.4 | | | | | 408.2 |
| Queue Delay | 8.7 | | | | | 0.3 |
| Total Delay | 25.1 | | | | | 408.5 |
| LOS | C | | | | | F |
| Approach Delay | 25.1 | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019

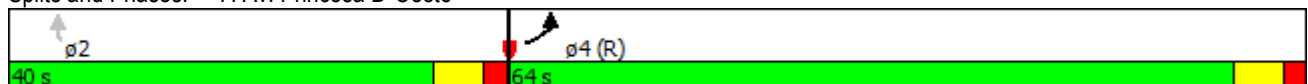


| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|-------|-----|------|-----|-------|--------|
| Approach LOS | C | | | | | |
| Stops (vph) | 750 | | | | | 1365 |
| Fuel Used(l) | 34 | | | | | 737 |
| CO Emissions (g/hr) | 626 | | | | | 13699 |
| NOx Emissions (g/hr) | 121 | | | | | 2644 |
| VOC Emissions (g/hr) | 144 | | | | | 3160 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 84.4 | | | | | ~292.9 |
| Queue Length 95th (m) | 107.0 | | | | | #329.7 |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1815 | | | | | 1118 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 605 | | | | | 71 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.97 | | | | | 1.97 |

Intersection Summary

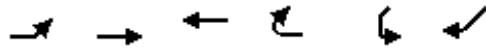
Area Type: Other
 Cycle Length: 104
 Actuated Cycle Length: 104
 Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.84
 Intersection Signal Delay: 269.1
 Intersection LOS: F
 Intersection Capacity Utilization 88.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 709 | 643 | 0 | 0 | 0 | 749 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 709 | 643 | 0 | 0 | 0 | 749 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.998 | | | 0.986 | | | 0.937 | | | 0.931 | |
| Flt Protected | | 0.981 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1946 | 0 | 0 | 1904 | 0 |
| Flt Permitted | | 0.981 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1946 | 0 | 0 | 1904 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 197 | 307 | 8 | 84 | 211 | 34 | 6 | 312 | 278 | 31 | 225 | 264 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 512 | 0 | 0 | 329 | 0 | 0 | 596 | 0 | 0 | 520 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 95.8% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 490 | 428 | 544 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.921 | |
| Flt Protected | | | | | 0.977 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1746 | 3160 | 0 |
| Flt Permitted | | | | | 0.977 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1746 | 3160 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 259.2 | | 40.3 | |
| Travel Time (s) | 2.3 | | 18.7 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 510 | 504 | 567 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 510 | 1071 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 260 | 1187 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4703 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4703 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 193.3 | | 63.1 |
| Travel Time (s) | | 13.9 | | 4.5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 306 | 1397 | 34 | 1829 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 306 | 1431 | 0 | 1829 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 59.0 | 46.0 | | 53.0 |
| Total Split (%) | 56.2% | 43.8% | | 50.5% |
| Maximum Green (s) | 55.0 | 40.0 | | 48.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 55.0 | 40.0 | | 54.0 |
| Actuated g/C Ratio | 0.52 | 0.38 | | 0.51 |
| v/c Ratio | 0.17 | 0.80 | | 0.75 |
| Control Delay | 13.4 | 33.1 | | 22.8 |
| Queue Delay | 62.5 | 0.0 | | 48.7 |
| Total Delay | 75.9 | 33.1 | | 71.4 |
| LOS | E | C | | E |
| Approach Delay | | 33.1 | | 71.4 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

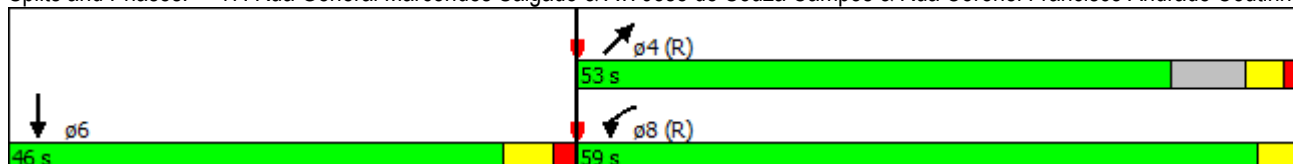


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|-------|------|-------|
| Approach LOS | | C | | E |
| Stops (vph) | 146 | 1183 | | 1335 |
| Fuel Used(l) | 7 | 87 | | 71 |
| CO Emissions (g/hr) | 134 | 1613 | | 1324 |
| NOx Emissions (g/hr) | 26 | 311 | | 256 |
| VOC Emissions (g/hr) | 31 | 372 | | 305 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 17.0 | 98.8 | | 109.4 |
| Queue Length 95th (m) | 24.6 | 118.3 | | 129.1 |
| Internal Link Dist (m) | | 169.3 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1755 | 1791 | | 2425 |
| Starvation Cap Reductn | 1512 | 0 | | 1186 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.26 | 0.80 | | 1.48 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 105 |
| Actuated Cycle Length: | 105 |
| Offset: | 50 (48%), Referenced to phase 4:NET and 8:WBL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.80 |
| Intersection Signal Delay: | 56.4 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 81.5% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

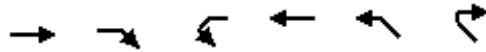
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



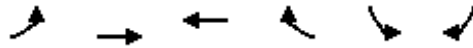
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 621 | 336 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.943 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3234 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3234 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 647 | 396 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1043 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 32.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 106 | 211 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 106 | 211 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.9% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 524 | 106 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 524 | 106 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frts | | | | | | | | 0.969 | | | | |
| Flt Protected | | 0.996 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.996 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 80 | 938 | 0 | 0 | 0 | 0 | 0 | 1006 | 266 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1018 | 0 | 0 | 0 | 0 | 0 | 1272 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 21.0 | 21.0 | | | | | | 58.0 | | | | |
| Total Split (%) | 26.6% | 26.6% | | | | | | 73.4% | | | | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 53.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 5.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 53.0 | | | | |
| Actuated g/C Ratio | | 0.20 | | | | | | 0.67 | | | | |
| v/c Ratio | | 1.48 | | | | | | 0.42 | | | | |
| Control Delay | | 249.3 | | | | | | 6.5 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 249.3 | | | | | | 6.5 | | | | |
| LOS | | F | | | | | | A | | | | |
| Approach Delay | | 249.3 | | | | | | 6.5 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | F | | | | | | A | | | | |
| Stops (vph) | | 759 | | | | | | 504 | | | | |
| Fuel Used(l) | | 207 | | | | | | 21 | | | | |
| CO Emissions (g/hr) | | 3857 | | | | | | 382 | | | | |
| NOx Emissions (g/hr) | | 744 | | | | | | 74 | | | | |
| VOC Emissions (g/hr) | | 890 | | | | | | 88 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | ~118.1 | | | | | | 28.8 | | | | |
| Queue Length 95th (m) | | #156.2 | | | | | | 36.5 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 690 | | | | | | 3029 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 1.48 | | | | | | 0.42 | | | | |

Intersection Summary

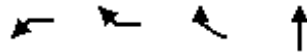
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 79 |
| Actuated Cycle Length: | 79 |
| Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green | |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.48 |
| Intersection Signal Delay: | 114.4 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 59.8% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

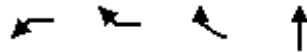


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 457 | 441 | 292 | 1525 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.935 | 0.850 | | |
| Flt Protected | 0.973 | | | |
| Satd. Flow (prot) | 3165 | 1373 | 0 | 4916 |
| Flt Permitted | 0.973 | | | |
| Satd. Flow (perm) | 3165 | 1373 | 0 | 4916 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 538 | 519 | 344 | 1795 |
| Shared Lane Traffic (%) | | 80% | | |
| Lane Group Flow (vph) | 953 | 448 | 0 | 1795 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 43.0 | 43.0 | | 30.0 |
| Total Split (%) | 58.9% | 58.9% | | 41.1% |
| Maximum Green (s) | 38.0 | 38.0 | | 25.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 38.0 | 38.0 | | 25.0 |
| Actuated g/C Ratio | 0.52 | 0.52 | | 0.34 |
| v/c Ratio | 0.58 | 0.63 | | 1.07 |
| Control Delay | 13.8 | 17.4 | | 67.6 |
| Queue Delay | 0.0 | 0.0 | | 15.4 |
| Total Delay | 13.8 | 17.4 | | 83.0 |
| LOS | B | B | | F |
| Approach Delay | 14.9 | | | 83.0 |

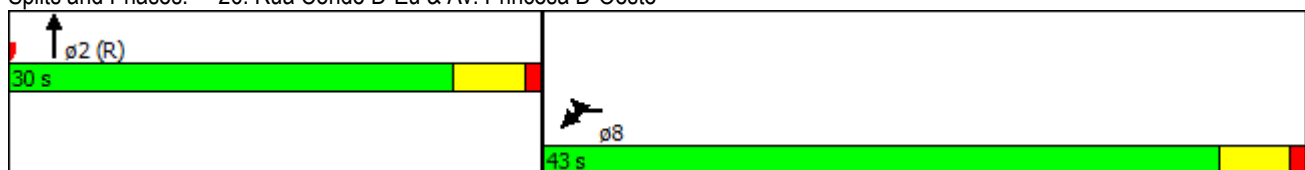


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|--------|
| Approach LOS | B | | | F |
| Stops (vph) | 590 | 299 | | 1484 |
| Fuel Used(l) | 32 | 17 | | 134 |
| CO Emissions (g/hr) | 601 | 314 | | 2494 |
| NOx Emissions (g/hr) | 116 | 61 | | 481 |
| VOC Emissions (g/hr) | 139 | 72 | | 575 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 45.3 | 47.1 | | ~107.1 |
| Queue Length 95th (m) | 62.4 | 81.0 | | #136.4 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1647 | 714 | | 1683 |
| Starvation Cap Reductn | 0 | 0 | | 573 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.58 | 0.63 | | 1.62 |

Intersection Summary

Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 73
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 53.1
 Intersection LOS: D
 Intersection Capacity Utilization 77.5%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Fr | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1178 | 1542 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1178 | 1542 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 96.0 | 96.0 | 8.0 |
| Total Split (%) | | | | | 92.3% | 92.3% | 8% |
| Maximum Green (s) | | | | | 90.0 | 90.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 90.0 | 90.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.43 | 0.38 | |
| Control Delay | | | | | 2.0 | 1.7 | |
| Queue Delay | | | | | 2.0 | 1.2 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 4.0 | 2.8 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 3.3 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 195 | 237 | |
| Fuel Used(l) | | | | | 15 | 19 | |
| CO Emissions (g/hr) | | | | | 278 | 349 | |
| NOx Emissions (g/hr) | | | | | 54 | 67 | |
| VOC Emissions (g/hr) | | | | | 64 | 81 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 17.2 | 14.8 | |
| Queue Length 95th (m) | | | | | 21.7 | 17.8 | |
| Internal Link Dist (m) | 0.1 | | 254.1 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2760 | 4088 | |
| Starvation Cap Reductn | | | | | 1373 | 2195 | |
| Spillback Cap Reductn | | | | | 872 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.85 | 0.81 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 0 (0%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.43 |
| Intersection Signal Delay: | 3.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 61.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 1956 | 0 | 0 | 1650 | 262 | 366 | 851 | 66 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Flt | | | | | 0.979 | | | 0.999 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 100% | 113% | 113% | 113% | 113% | 100% | 100% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 6% | 2% | 2% | 4% | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2038 | 0 | 0 | 1942 | 308 | 381 | 886 | 78 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 2038 | 0 | 0 | 2250 | 0 | 381 | 894 | 70 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 73.0 | | | 68.0 | | 37.0 | 37.0 | 37.0 | | |
| Total Split (%) | | 66.4% | | | 61.8% | | 33.6% | 33.6% | 33.6% | | |
| Maximum Green (s) | | 68.0 | | | 64.0 | | 32.0 | 32.0 | 32.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 68.0 | | | 69.0 | | 32.0 | 32.0 | 32.0 | | |
| Actuated g/C Ratio | | 0.62 | | | 0.63 | | 0.29 | 0.29 | 0.29 | | |
| v/c Ratio | | 0.72 | | | 0.78 | | 0.77 | 1.80 | 0.17 | | |
| Control Delay | | 16.3 | | | 17.4 | | 47.3 | 392.7 | 30.4 | | |
| Queue Delay | | 48.1 | | | 0.0 | | 67.1 | 5.2 | 94.3 | | |
| Total Delay | | 64.4 | | | 17.4 | | 114.4 | 398.0 | 124.8 | | |
| LOS | | E | | | B | | F | F | F | | |
| Approach Delay | | 64.4 | | | 17.4 | | | 303.4 | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

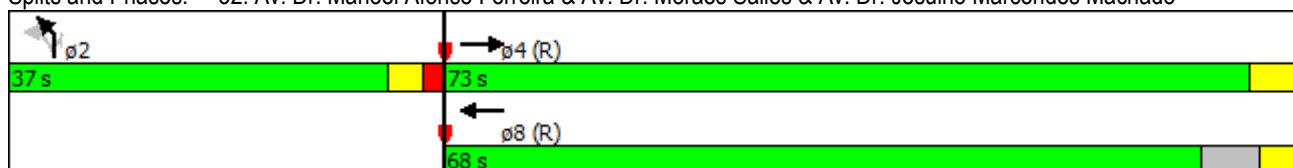


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|-------|-----|-----|-------|-----|--------|--------|------|------|-----|
| Approach LOS | | E | | | B | | | F | | | |
| Stops (vph) | | 1275 | | | 1499 | | 325 | 592 | 49 | | |
| Fuel Used(l) | | 64 | | | 103 | | 22 | 276 | 3 | | |
| CO Emissions (g/hr) | | 1190 | | | 1918 | | 407 | 5127 | 54 | | |
| NOx Emissions (g/hr) | | 230 | | | 370 | | 79 | 989 | 10 | | |
| VOC Emissions (g/hr) | | 274 | | | 442 | | 94 | 1182 | 12 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | 107.5 | | | 125.7 | | 78.5 | ~303.9 | 12.4 | | |
| Queue Length 95th (m) | | 125.8 | | | 146.4 | | #122.6 | #381.2 | 24.8 | | |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 13.6 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2836 | | | 2883 | | 497 | 498 | 422 | | |
| Starvation Cap Reductn | | 1300 | | | 0 | | 349 | 202 | 365 | | |
| Spillback Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 1.33 | | | 0.78 | | 2.57 | 3.02 | 1.23 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 100
 Control Type: Pretimed
 Maximum v/c Ratio: 1.80
 Intersection Signal Delay: 102.7
 Intersection LOS: F
 Intersection Capacity Utilization 176.1%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↑↕ | |
| Volume (vph) | 427 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 761 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frnt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.969 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Flt Permitted | | 0.969 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 155.6 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 11.2 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 445 | 259 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 896 | 66 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 704 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 962 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 85.0 | 85.0 | | | | | | | | 26.0 | |
| Total Split (%) | 76.6% | 76.6% | | | | | | | | 23.4% | |
| Maximum Green (s) | 81.0 | 81.0 | | | | | | | | 22.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 4.0 | | | | | | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 81.0 | | | | | | | | 22.0 | |
| Actuated g/C Ratio | | 0.73 | | | | | | | | 0.20 | |
| v/c Ratio | | 0.29 | | | | | | | | 1.84 | |
| Control Delay | | 5.5 | | | | | | | | 413.1 | |
| Queue Delay | | 0.0 | | | | | | | | 0.0 | |
| Total Delay | | 5.5 | | | | | | | | 413.1 | |
| LOS | | A | | | | | | | | F | |
| Approach Delay | | 5.5 | | | | | | | | | |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

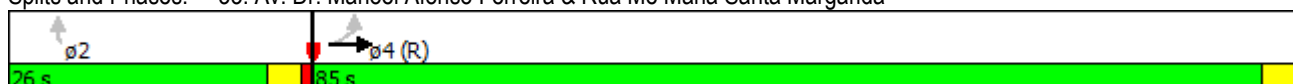


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 | |
|------------------------|-----|------|-----|-----|------|-----|------|-----|-------|--------|------|--|
| Approach LOS | | A | | | | | | | | | | |
| Stops (vph) | | 212 | | | | | | | | 633 | | |
| Fuel Used(l) | | 9 | | | | | | | | 322 | | |
| CO Emissions (g/hr) | | 164 | | | | | | | | 5982 | | |
| NOx Emissions (g/hr) | | 32 | | | | | | | | 1155 | | |
| VOC Emissions (g/hr) | | 38 | | | | | | | | 1380 | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | | |
| Queue Length 50th (m) | | 25.1 | | | | | | | | ~189.3 | | |
| Queue Length 95th (m) | | 32.5 | | | | | | | | #234.2 | | |
| Internal Link Dist (m) | | 0.1 | | | 49.4 | | 13.6 | | 131.6 | | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2401 | | | | | | | | 523 | | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | | |
| Spillback Cap Reductn | | 0 | | | | | | | | 0 | | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | | |
| Reduced v/c Ratio | | 0.29 | | | | | | | | 1.84 | | |

Intersection Summary

| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 111 |
| Actuated Cycle Length: | 111 |
| Offset: | 46 (41%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.84 |
| Intersection Signal Delay: | 240.9 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 62.6% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 858 | 0 | 1147 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 208.9 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.0 | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 894 | 0 | 1195 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 894 | 0 | 1195 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

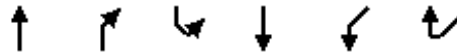
Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

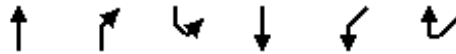


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | No | | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2109 | 1130 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3239 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 96.0 | | | | | | 8.0 |
| Total Split (%) | 92.3% | | | | | | 8% |
| Maximum Green (s) | 90.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 90.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 0.86dr | | | | | | |
| Control Delay | 8.2 | | | | | | |
| Queue Delay | 46.6 | | | | | | |
| Total Delay | 54.8 | | | | | | |
| LOS | D | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|-----|------|------|-----|-----|
| Approach Delay | 54.8 | | | | | | |
| Approach LOS | D | | | | | | |
| Stops (vph) | 1695 | | | | | | |
| Fuel Used(l) | 77 | | | | | | |
| CO Emissions (g/hr) | 1440 | | | | | | |
| NOx Emissions (g/hr) | 278 | | | | | | |
| VOC Emissions (g/hr) | 332 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 56.3 | | | | | | |
| Queue Length 95th (m) | m22.0 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 3964 | | | | | | |
| Starvation Cap Reductn | 1353 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.24 | | | | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 104 |
| Actuated Cycle Length: | 104 |
| Offset: | 32 (31%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.82 |
| Intersection Signal Delay: | 54.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 68.4% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |
| m | Volume for 95th percentile queue is metered by upstream signal. |
| dr | Defacto Right Lane. Recode with 1 though lane as a right lane. |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frnt | | | | | 0.993 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 306 | 145 | 0 | 2109 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 10% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 321 | 130 | 0 | 2109 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 30.0 | 30.0 | | | | |
| Total Split (%) | | | | | 33.3% | 33.3% | 66.7% | 66.7% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 24.0 | 24.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 24.0 | | | | |
| Actuated g/C Ratio | | | | | 0.22 | 0.22 | | 0.53 | | | | |
| v/c Ratio | | | | | 0.45 | 0.43 | | 0.81 | | | | |
| Control Delay | | | | | 17.4 | 20.2 | | 12.1 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 47.3 | | | | |
| Total Delay | | | | | 17.4 | 20.2 | | 59.4 | | | | |
| LOS | | | | | B | C | | E | | | | |
| Approach Delay | | | | | 18.2 | | | 59.4 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|-----|
| Approach LOS | | | | | B | | | E | | | | |
| Stops (vph) | | | | | 249 | 104 | | 1486 | | | | |
| Fuel Used(l) | | | | | 12 | 5 | | 64 | | | | |
| CO Emissions (g/hr) | | | | | 219 | 95 | | 1195 | | | | |
| NOx Emissions (g/hr) | | | | | 42 | 18 | | 231 | | | | |
| VOC Emissions (g/hr) | | | | | 50 | 22 | | 276 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 12.6 | 10.2 | | 45.4 | | | | |
| Queue Length 95th (m) | | | | | 22.3 | 23.6 | | 63.3 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 719 | 304 | | 2594 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 866 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.45 | 0.43 | | 1.22 | | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 45 |
| Actuated Cycle Length: | 45 |
| Offset: | 5 (11%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 52.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 68.4% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 725 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.948 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1542 | 3239 | 1658 | 4456 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1542 | 3239 | 1658 | 4456 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 213.6 | |
| Travel Time (s) | | 2.4 | | 15.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 211 | 454 | 815 | 1618 | 853 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 190 | 475 | 815 | 2471 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.64 | 0.76 | 0.66 | 0.74 | |
| Control Delay | 63.0 | 62.4 | 11.7 | 11.5 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|-------|-------|-----|
| Total Delay | 63.0 | 62.4 | 11.7 | 11.5 | |
| LOS | E | E | B | B | |
| Approach Delay | | 62.6 | | 11.6 | |
| Approach LOS | | E | | B | |
| Stops (vph) | 168 | 424 | 369 | 1249 | |
| Fuel Used(l) | 13 | 33 | 31 | 97 | |
| CO Emissions (g/hr) | 245 | 611 | 580 | 1808 | |
| NOx Emissions (g/hr) | 47 | 118 | 112 | 349 | |
| VOC Emissions (g/hr) | 56 | 141 | 134 | 417 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 56.5 | 72.7 | 103.5 | 131.0 | |
| Queue Length 95th (m) | 87.4 | 94.5 | 142.7 | 147.0 | |
| Internal Link Dist (m) | | 9.3 | | 189.6 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 297 | 624 | 1243 | 3342 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.64 | 0.76 | 0.66 | 0.74 | |

Intersection Summary

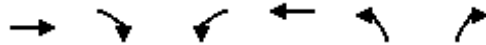
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 24 (17%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.76 |
| Intersection Signal Delay: | 20.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 67.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019

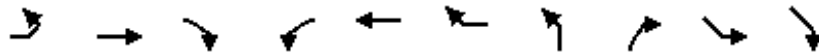


| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.996 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1269 | 39 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1308 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.7% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Colombo



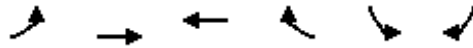
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2 | 32 | 815 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2 | 32 | 815 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 663 | 0 | 0 | 2 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 663 | 0 | 0 | 2 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 47.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr't | | 0.850 | | | 0.978 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1269 | 0 | 0 | 1451 | 252 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1269 | 0 | 0 | 1703 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 59.0 | | | 63.0 | | | |
| Total Split (%) | | 48.4% | | | 51.6% | | | |
| Maximum Green (s) | | 55.0 | | | 59.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 55.0 | | | 59.0 | | | |
| Actuated g/C Ratio | | 0.45 | | | 0.48 | | | |
| v/c Ratio | | 0.81 | | | 0.76 | | | |
| Control Delay | | 34.3 | | | 28.4 | | | |
| Queue Delay | | 0.0 | | | 49.2 | | | |
| Total Delay | | 34.3 | | | 77.6 | | | |
| LOS | | C | | | E | | | |
| Approach Delay | | | | | 77.6 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

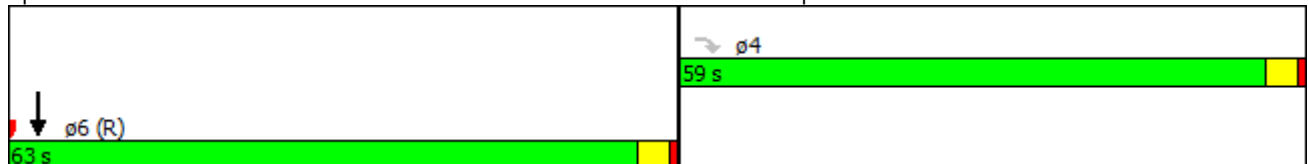


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|-------|-----|------|-------|-----|------|-----|
| Approach LOS | | | | | E | | | |
| Stops (vph) | | 1030 | | | 1289 | | | |
| Fuel Used(l) | | 60 | | | 74 | | | |
| CO Emissions (g/hr) | | 1115 | | | 1372 | | | |
| NOx Emissions (g/hr) | | 215 | | | 265 | | | |
| VOC Emissions (g/hr) | | 257 | | | 316 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 119.2 | | | 124.8 | | | |
| Queue Length 95th (m) | | 144.6 | | | 144.6 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1558 | | | 2247 | | | |
| Starvation Cap Reductn | | 0 | | | 1161 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.81 | | | 1.57 | | | |

Intersection Summary

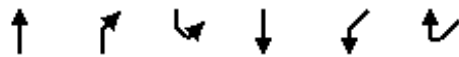
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 122 |
| Actuated Cycle Length: | 122 |
| Offset: | 112 (92%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 59.1 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 67.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 39 | 252 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 39 | 252 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 23.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 128.3 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.2 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 40 | 1272 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1312 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 136.8 | | | 22.0 |
| Travel Time (s) | 2.4 | | 9.8 | | | 1.6 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 40 | 0 | 0 | 0 | 0 | 1019 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 40 | 0 | 0 | 0 | 0 | 1019 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 709 | 0 | 0 | 1086 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 709 | 0 | 0 | 1086 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 28.0 | | | 49.0 | | |
| Total Split (%) | 36.4% | | | 63.6% | | |
| Maximum Green (s) | 21.0 | | | 44.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 21.0 | | | 44.0 | | |
| Actuated g/C Ratio | 0.27 | | | 0.57 | | |
| v/c Ratio | 0.78 | | | 0.39 | | |
| Control Delay | 33.3 | | | 9.6 | | |
| Queue Delay | 58.3 | | | 3.5 | | |
| Total Delay | 91.6 | | | 13.1 | | |
| LOS | F | | | B | | |
| Approach Delay | 91.6 | | | 13.1 | | |
| Approach LOS | F | | | B | | |
| Stops (vph) | 602 | | | 529 | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|-------|-----|-----|------|------|-----|
| Fuel Used(l) | 33 | | | 26 | | |
| CO Emissions (g/hr) | 619 | | | 488 | | |
| NOx Emissions (g/hr) | 120 | | | 94 | | |
| VOC Emissions (g/hr) | 143 | | | 113 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 51.7 | | | 30.6 | | |
| Queue Length 95th (m) | #71.8 | | | 39.3 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 905 | | | 2809 | | |
| Starvation Cap Reductn | 618 | | | 1599 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 2.47 | | | 0.90 | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 77 |
| Actuated Cycle Length: | 77 |
| Offset: | 4 (5%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.78 |
| Intersection Signal Delay: | 44.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 112.2% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

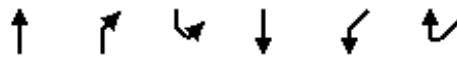
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



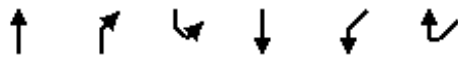
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1606 | 538 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1606 | 538 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 47.0 | 33.0 | |
| Total Split (%) | | | | 58.8% | 41.3% | |
| Maximum Green (s) | | | | 42.0 | 29.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 4.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 42.0 | 29.0 | |
| Actuated g/C Ratio | | | | 0.52 | 0.36 | |
| v/c Ratio | | | | 0.62 | 0.45 | |
| Control Delay | | | | 14.8 | 20.9 | |
| Queue Delay | | | | 50.0 | 0.0 | |
| Total Delay | | | | 64.8 | 20.9 | |
| LOS | | | | E | C | |
| Approach Delay | | | | 64.8 | 20.9 | |
| Approach LOS | | | | E | C | |
| Stops (vph) | | | | 1022 | 376 | |

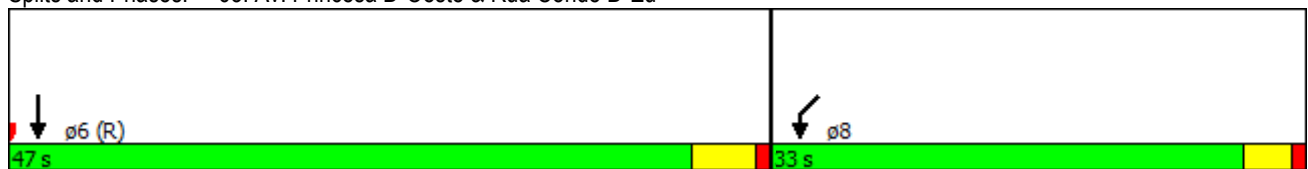


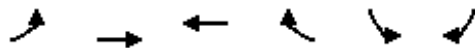
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | | | | 46 | 18 | |
| CO Emissions (g/hr) | | | | 860 | 340 | |
| NOx Emissions (g/hr) | | | | 166 | 66 | |
| VOC Emissions (g/hr) | | | | 198 | 78 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 62.1 | 33.1 | |
| Queue Length 95th (m) | | | | 76.7 | 47.0 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2580 | 1203 | |
| Starvation Cap Reductn | | | | 1589 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.62 | 0.45 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 80 |
| Actuated Cycle Length: | 80 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.62 |
| Intersection Signal Delay: | 53.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 52.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu





| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 438 | 5 | 0 | 13 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 443 | 0 | 0 | 13 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 21.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1829 | 0 | 0 | 0 | 0 | 2254 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1829 | 0 | 0 | 0 | 0 | 2254 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 59.0 | | | | | 30.0 |
| Total Split (%) | 66.3% | | | | | 33.7% |
| Maximum Green (s) | 55.0 | | | | | 24.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 55.0 | | | | | 24.0 |
| Actuated g/C Ratio | 0.62 | | | | | 0.27 |
| v/c Ratio | 0.86 | | | | | 2.42 |
| Control Delay | 19.1 | | | | | 662.8 |
| Queue Delay | 47.8 | | | | | 1.8 |
| Total Delay | 66.9 | | | | | 664.7 |
| LOS | E | | | | | F |
| Approach Delay | 66.9 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|-------|-----|-----|------|------|--------|
| Approach LOS | E | | | | | |
| Stops (vph) | 1342 | | | | | 1572 |
| Fuel Used(l) | 63 | | | | | 1147 |
| CO Emissions (g/hr) | 1168 | | | | | 21337 |
| NOx Emissions (g/hr) | 225 | | | | | 4118 |
| VOC Emissions (g/hr) | 269 | | | | | 4921 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 127.4 | | | | | ~296.4 |
| Queue Length 95th (m) | 164.9 | | | | | #333.2 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 2135 | | | | | 931 |
| Starvation Cap Reductn | 862 | | | | | 251 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.44 | | | | | 3.31 |

Intersection Summary

Area Type: Other
 Cycle Length: 89
 Actuated Cycle Length: 89
 Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.42
 Intersection Signal Delay: 396.9
 Intersection LOS: F
 Intersection Capacity Utilization 107.3%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Moraes Machado

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1882 | 327 | 0 | 2230 | 0 | 65 | 658 | 112 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3081 | 1351 | 0 | 4677 | 0 | 0 | 3275 | 1500 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3081 | 1351 | 0 | 4677 | 0 | 0 | 3275 | 1500 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 92.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 6.6 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 4% | 2% | 4% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1960 | 385 | 0 | 2323 | 0 | 77 | 685 | 132 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1999 | 346 | 0 | 2323 | 0 | 0 | 762 | 132 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 76.0 | 76.0 | | 73.0 | | 38.0 | 38.0 | 38.0 | | |
| Total Split (%) | | 66.7% | 66.7% | | 64.0% | | 33.3% | 33.3% | 33.3% | | |
| Maximum Green (s) | | 72.0 | 72.0 | | 68.0 | | 33.0 | 33.0 | 33.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 72.0 | 72.0 | | 71.0 | | | 33.0 | 33.0 | | |
| Actuated g/C Ratio | | 0.63 | 0.63 | | 0.62 | | | 0.29 | 0.29 | | |
| v/c Ratio | | 1.03 | 0.41 | | 0.80 | | | 0.80 | 0.30 | | |
| Control Delay | | 49.7 | 12.2 | | 18.8 | | | 45.2 | 34.0 | | |
| Queue Delay | | 0.0 | 0.0 | | 47.5 | | | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

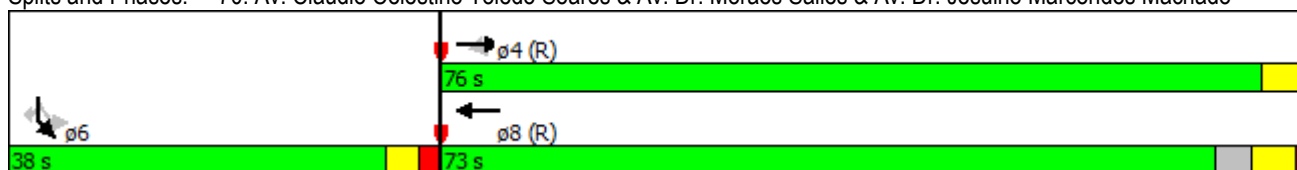


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|------|-----|-------|-----|------|-------|------|------|-----|
| Total Delay | | 49.7 | 12.2 | | 66.4 | | | 45.2 | 34.0 | | |
| LOS | | D | B | | E | | | D | C | | |
| Approach Delay | | 44.2 | | | 66.4 | | | 43.5 | | | |
| Approach LOS | | D | | | E | | | D | | | |
| Stops (vph) | | 1619 | 157 | | 1594 | | | 660 | 97 | | |
| Fuel Used(l) | | 127 | 10 | | 80 | | | 45 | 6 | | |
| CO Emissions (g/hr) | | 2353 | 177 | | 1496 | | | 830 | 116 | | |
| NOx Emissions (g/hr) | | 454 | 34 | | 289 | | | 160 | 22 | | |
| VOC Emissions (g/hr) | | 543 | 41 | | 345 | | | 191 | 27 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~275.7 | 40.9 | | 139.0 | | | 85.3 | 24.1 | | |
| Queue Length 95th (m) | | #321.9 | 62.6 | | 160.7 | | | 109.1 | 41.6 | | |
| Internal Link Dist (m) | | 68.3 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1945 | 853 | | 2912 | | | 948 | 434 | | |
| Starvation Cap Reductn | | 0 | 0 | | 1213 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.03 | 0.41 | | 1.37 | | | 0.80 | 0.30 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 114
 Actuated Cycle Length: 114
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 53.3
 Intersection LOS: D
 Intersection Capacity Utilization 176.1%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.952 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 580 | 820 | 384 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 580 | 1204 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 63.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.997 | | | 0.997 | | | 0.983 | | | 0.915 | |
| Flt Protected | | 0.978 | | | 0.990 | | | 0.990 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 3199 | 0 | 0 | 3037 | 0 |
| Flt Permitted | | 0.978 | | | 0.990 | | | 0.866 | | | 0.922 | |
| Satd. Flow (perm) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 2798 | 0 | 0 | 2812 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 99.0 | | | 99.0 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 7.1 | | | 7.1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 505 | 585 | 24 | 131 | 484 | 14 | 34 | 121 | 20 | 9 | 46 | 72 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1114 | 0 | 0 | 629 | 0 | 0 | 175 | 0 | 0 | 127 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 40.0 | 40.0 | | 26.0 | 26.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Total Split (%) | 50.0% | 50.0% | | 32.5% | 32.5% | | 17.5% | 17.5% | | 17.5% | 17.5% | |
| Maximum Green (s) | 34.0 | 34.0 | | 20.0 | 20.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 34.0 | | | 20.0 | | | 9.0 | | | 9.0 | |
| Actuated g/C Ratio | | 0.42 | | | 0.25 | | | 0.11 | | | 0.11 | |
| v/c Ratio | | 0.82 | | | 0.77 | | | 0.56 | | | 0.40 | |
| Control Delay | | 26.8 | | | 35.6 | | | 41.0 | | | 37.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 26.8 | | | 35.6 | | | 41.0 | | | 37.2 | |
| LOS | | C | | | D | | | D | | | D | |
| Approach Delay | | 26.8 | | | 35.6 | | | 41.0 | | | 37.2 | |

Lanes, Volumes, Timings
 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

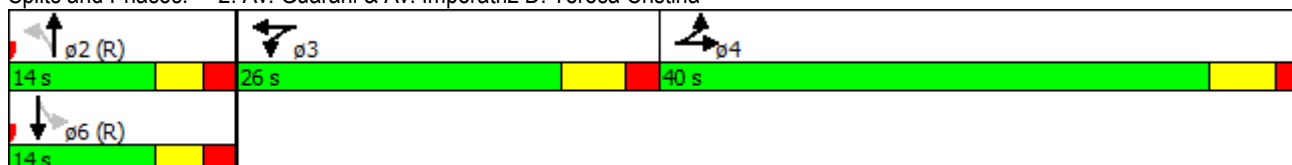


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | C | | | D | | | D | | | D | |
| Stops (vph) | | 897 | | | 539 | | | 156 | | | 110 | |
| Fuel Used(l) | | 61 | | | 50 | | | 10 | | | 7 | |
| CO Emissions (g/hr) | | 1134 | | | 925 | | | 193 | | | 132 | |
| NOx Emissions (g/hr) | | 219 | | | 179 | | | 37 | | | 26 | |
| VOC Emissions (g/hr) | | 262 | | | 213 | | | 45 | | | 30 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 80.2 | | | 49.2 | | | 14.2 | | | 10.1 | |
| Queue Length 95th (m) | | 107.2 | | | #68.8 | | | 24.4 | | | 18.6 | |
| Internal Link Dist (m) | | 79.9 | | | 64.6 | | | 75.0 | | | 75.0 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1354 | | | 813 | | | 314 | | | 316 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.82 | | | 0.77 | | | 0.56 | | | 0.40 | |

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 22 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 31.4 Intersection LOS: C
 Intersection Capacity Utilization 72.4% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.986 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1400 | 142 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1542 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 32.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.993 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 554 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 464 | 931 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 583 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1395 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | | 27.0 | | | | | | | | 33.0 | 33.0 | |
| Total Split (%) | | 45.0% | | | | | | | | 55.0% | 55.0% | |
| Maximum Green (s) | | 20.0 | | | | | | | | 28.0 | 28.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 20.0 | | | | | | | | | 28.0 | |
| Actuated g/C Ratio | | 0.33 | | | | | | | | | 0.47 | |
| v/c Ratio | | 0.53 | | | | | | | | | 0.62 | |
| Control Delay | | 18.3 | | | | | | | | | 1.8 | |
| Queue Delay | | 0.0 | | | | | | | | | 2.2 | |
| Total Delay | | 18.3 | | | | | | | | | 4.0 | |
| LOS | | B | | | | | | | | | A | |
| Approach Delay | | 18.3 | | | | | | | | | 4.0 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



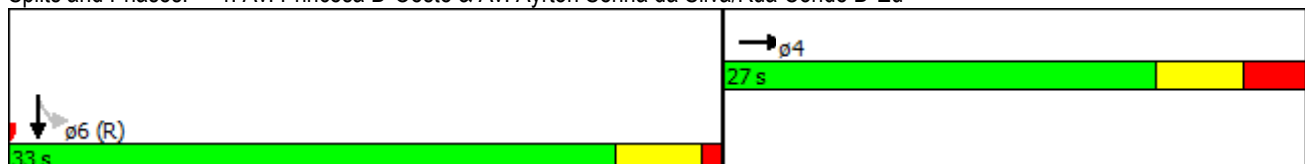
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Approach LOS | | B | | | | | | | | | | A |
| Stops (vph) | | 428 | | | | | | | | | | 412 |
| Fuel Used(l) | | 20 | | | | | | | | | | 17 |
| CO Emissions (g/hr) | | 372 | | | | | | | | | | 313 |
| NOx Emissions (g/hr) | | 72 | | | | | | | | | | 61 |
| VOC Emissions (g/hr) | | 86 | | | | | | | | | | 72 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 28.1 | | | | | | | | | | 1.1 |
| Queue Length 95th (m) | | 42.1 | | | | | | | | | | m3.0 |
| Internal Link Dist (m) | | 22.8 | | | | 7.7 | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1099 | | | | | | | | | | 2249 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 680 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.53 | | | | | | | | | | 0.89 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 60 |
| Offset: | 35 (58%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.62 |
| Intersection Signal Delay: | 8.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 51.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|--------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.948 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 709 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1395 | 749 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 709 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2144 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | | 37.0 | |
| Total Split (%) | | 38.3% | | | | | | | | | 61.7% | |
| Maximum Green (s) | | 16.0 | | | | | | | | | 32.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 32.0 | |
| Actuated g/C Ratio | | 0.27 | | | | | | | | | 0.53 | |
| v/c Ratio | | 0.80 | | | | | | | | | 0.89dr | |
| Control Delay | | 29.2 | | | | | | | | | 11.2 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.4 | |
| Total Delay | | 29.2 | | | | | | | | | 11.6 | |
| LOS | | C | | | | | | | | | B | |
| Approach Delay | | 29.2 | | | | | | | | | 11.6 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-----|------|-----|------|-----|------|-----|------|
| Approach LOS | | C | | | | | | | | | | B |
| Stops (vph) | | 587 | | | | | | | | | | 1258 |
| Fuel Used(l) | | 32 | | | | | | | | | | 59 |
| CO Emissions (g/hr) | | 600 | | | | | | | | | | 1103 |
| NOx Emissions (g/hr) | | 116 | | | | | | | | | | 213 |
| VOC Emissions (g/hr) | | 138 | | | | | | | | | | 254 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 40.1 | | | | | | | | | | 32.7 |
| Queue Length 95th (m) | | #65.6 | | | | | | | | | | 37.5 |
| Internal Link Dist (m) | | 34.2 | | | | 12.6 | | 21.2 | | 44.4 | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 885 | | | | | | | | | | 2493 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 80 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.80 | | | | | | | | | | 0.89 |

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 29 (48%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 16.0 Intersection LOS: B
 Intersection Capacity Utilization 70.8% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



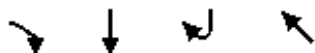
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑↑ | | ↑↑ |
| Volume (vph) | 179 | 1185 | 4 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1589 | 4911 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1589 | 4911 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 211 | 1395 | 5 | 519 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 211 | 1400 | 0 | 519 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 35.0 | | 25.0 |
| Total Split (%) | | 58.3% | | 41.7% |
| Maximum Green (s) | | 30.0 | | 20.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 60.0 | 30.0 | | 20.0 |
| Actuated g/C Ratio | 1.00 | 0.50 | | 0.33 |
| v/c Ratio | 0.13 | 0.57 | | 0.46 |
| Control Delay | 0.2 | 11.6 | | 3.2 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.2 | 11.6 | | 3.2 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | B | | A |
| Approach Delay | | 11.6 | | 3.2 |
| Approach LOS | | B | | A |
| Stops (vph) | 0 | 865 | | 142 |
| Fuel Used(l) | 1 | 49 | | 6 |
| CO Emissions (g/hr) | 14 | 908 | | 110 |
| NOx Emissions (g/hr) | 3 | 175 | | 21 |
| VOC Emissions (g/hr) | 3 | 209 | | 25 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 38.2 | | 1.3 |
| Queue Length 95th (m) | 0.0 | 50.4 | | m4.2 |
| Internal Link Dist (m) | | 112.1 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1589 | 2455 | | 1129 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 14 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.13 | 0.57 | | 0.46 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 60 |
| Offset: | 30 (50%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.57 |
| Intersection Signal Delay: | 8.5 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 48.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

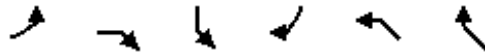
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

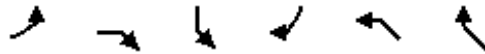
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1178 | 0 | 0 | 0 | 0 | 2061 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1178 | 0 | 0 | 0 | 0 | 2061 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 51.0 | | | | | 79.0 |
| Total Split (%) | 39.2% | | | | | 60.8% |
| Maximum Green (s) | 45.0 | | | | | 73.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 45.0 | | | | | 73.0 |
| Actuated g/C Ratio | 0.35 | | | | | 0.56 |
| v/c Ratio | 1.05 | | | | | 1.07 |
| Control Delay | 81.0 | | | | | 72.0 |
| Queue Delay | 21.5 | | | | | 6.2 |
| Total Delay | 102.5 | | | | | 78.2 |
| LOS | F | | | | | E |
| Approach Delay | 102.5 | | | | | |

Lanes, Volumes, Timings
 7: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|--------|-----|------|--------|-------|-----|
| Approach LOS | F | | | | | |
| Stops (vph) | 1000 | | | 1718 | | |
| Fuel Used(l) | 95 | | | 232 | | |
| CO Emissions (g/hr) | 1776 | | | 4323 | | |
| NOx Emissions (g/hr) | 343 | | | 834 | | |
| VOC Emissions (g/hr) | 410 | | | 997 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | ~177.4 | | | ~270.4 | | |
| Queue Length 95th (m) | #220.8 | | | #306.8 | | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1126 | | | 1920 | | |
| Starvation Cap Reductn | 0 | | | 0 | | |
| Spillback Cap Reductn | 86 | | | 26 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 1.13 | | | 1.09 | | |

Intersection Summary

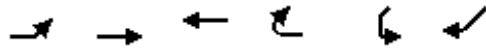
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 4:EBL, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 87.0 Intersection LOS: F
 Intersection Capacity Utilization 88.4% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 709 | 643 | 0 | 0 | 0 | 749 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 709 | 643 | 0 | 0 | 0 | 749 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.998 | | | 0.986 | | | 0.937 | | | 0.931 | |
| Flt Protected | | 0.981 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1946 | 0 | 0 | 1904 | 0 |
| Flt Permitted | | 0.981 | | | 0.987 | | | 0.999 | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1946 | 0 | 0 | 1904 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 197 | 307 | 8 | 84 | 211 | 34 | 6 | 312 | 278 | 31 | 225 | 264 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 512 | 0 | 0 | 329 | 0 | 0 | 596 | 0 | 0 | 520 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 95.8% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 490 | 428 | 544 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.921 | |
| Flt Protected | | | | | 0.977 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1746 | 3160 | 0 |
| Flt Permitted | | | | | 0.977 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1746 | 3160 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 259.2 | | 40.3 | |
| Travel Time (s) | 2.3 | | 18.7 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 510 | 504 | 567 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 510 | 1071 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 260 | 1187 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4703 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4703 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 193.3 | | 63.1 |
| Travel Time (s) | | 13.9 | | 4.5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 306 | 1397 | 34 | 1829 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 306 | 1431 | 0 | 1829 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 72.0 | 58.0 | | 72.0 |
| Total Split (%) | 55.4% | 44.6% | | 55.4% |
| Maximum Green (s) | 68.0 | 52.0 | | 67.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 68.0 | 52.0 | | 67.0 |
| Actuated g/C Ratio | 0.52 | 0.40 | | 0.52 |
| v/c Ratio | 0.17 | 0.76 | | 0.75 |
| Control Delay | 0.2 | 36.9 | | 20.3 |
| Queue Delay | 0.6 | 0.1 | | 47.7 |
| Total Delay | 0.8 | 37.0 | | 68.0 |
| LOS | A | D | | E |
| Approach Delay | | 37.0 | | 68.0 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

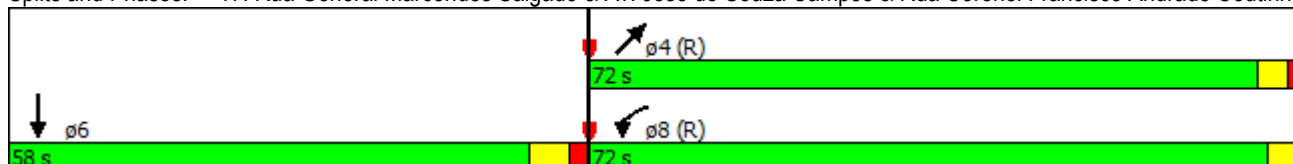


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|-------|------|-------|
| Approach LOS | | D | | E |
| Stops (vph) | 0 | 1152 | | 1407 |
| Fuel Used(l) | 1 | 90 | | 70 |
| CO Emissions (g/hr) | 18 | 1675 | | 1293 |
| NOx Emissions (g/hr) | 3 | 323 | | 250 |
| VOC Emissions (g/hr) | 4 | 386 | | 298 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 120.6 | | 148.3 |
| Queue Length 95th (m) | 0.0 | 139.7 | | 146.3 |
| Internal Link Dist (m) | | 169.3 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1752 | 1881 | | 2430 |
| Starvation Cap Reductn | 1084 | 0 | | 790 |
| Spillback Cap Reductn | 182 | 22 | | 315 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.46 | 0.77 | | 1.12 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 130 |
| Offset: | 116 (89%), Referenced to phase 4:NET and 8:WBL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.76 |
| Intersection Signal Delay: | 49.8 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 81.5% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

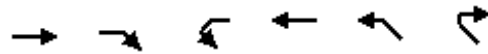
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



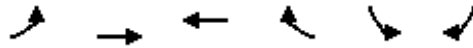
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 621 | 336 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.943 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3234 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3234 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 647 | 396 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1043 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 32.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 106 | 211 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 106 | 211 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 524 | 106 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 524 | 106 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.969 | | | | |
| Flt Protected | | 0.996 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.996 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 80 | 938 | 0 | 0 | 0 | 0 | 0 | 1006 | 266 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1018 | 0 | 0 | 0 | 0 | 0 | 1272 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 51.0 | 51.0 | | | | | | 49.0 | | | | |
| Total Split (%) | 51.0% | 51.0% | | | | | | 49.0% | | | | |
| Maximum Green (s) | 46.0 | 46.0 | | | | | | 44.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 5.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 46.0 | | | | | | 44.0 | | | | |
| Actuated g/C Ratio | | 0.46 | | | | | | 0.44 | | | | |
| v/c Ratio | | 0.65 | | | | | | 0.64 | | | | |
| Control Delay | | 23.2 | | | | | | 23.7 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 23.2 | | | | | | 23.7 | | | | |
| LOS | | C | | | | | | C | | | | |
| Approach Delay | | 23.2 | | | | | | 23.7 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

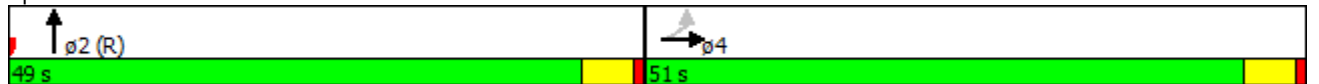


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|------------------------|-----|-------|-----|-----|------|-----|-----|-----|------|-----|------|-----|--|
| Approach LOS | | C | | | | | | | C | | | | |
| Stops (vph) | | 724 | | | | | | | 915 | | | | |
| Fuel Used(l) | | 37 | | | | | | | 46 | | | | |
| CO Emissions (g/hr) | | 681 | | | | | | | 854 | | | | |
| NOx Emissions (g/hr) | | 131 | | | | | | | 165 | | | | |
| VOC Emissions (g/hr) | | 157 | | | | | | | 197 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | 0 | | | | |
| Queue Length 50th (m) | | 81.6 | | | | | | | 72.1 | | | | |
| Queue Length 95th (m) | | 104.0 | | | | | | | 88.1 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | | |
| Turn Bay Length (m) | | | | | | | | | | | | | |
| Base Capacity (vph) | | 1567 | | | | | | | 1987 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 0.65 | | | | | | | 0.64 | | | | |

Intersection Summary

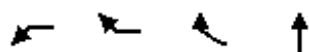
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 4 (4%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.65 |
| Intersection Signal Delay: | 23.5 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 59.8% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

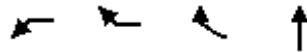


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 457 | 441 | 292 | 1525 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.935 | 0.850 | | |
| Flt Protected | 0.973 | | | |
| Satd. Flow (prot) | 3165 | 1373 | 0 | 4916 |
| Flt Permitted | 0.973 | | | |
| Satd. Flow (perm) | 3165 | 1373 | 0 | 4916 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 538 | 519 | 344 | 1795 |
| Shared Lane Traffic (%) | | 80% | | |
| Lane Group Flow (vph) | 953 | 448 | 0 | 1795 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 29.0 | 29.0 | | 31.0 |
| Total Split (%) | 48.3% | 48.3% | | 51.7% |
| Maximum Green (s) | 24.0 | 24.0 | | 26.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 24.0 | 24.0 | | 26.0 |
| Actuated g/C Ratio | 0.40 | 0.40 | | 0.43 |
| v/c Ratio | 0.75 | 0.82 | | 0.84 |
| Control Delay | 20.1 | 31.1 | | 13.2 |
| Queue Delay | 0.9 | 1.1 | | 0.1 |
| Total Delay | 21.0 | 32.2 | | 13.3 |
| LOS | C | C | | B |
| Approach Delay | 24.6 | | | 13.3 |

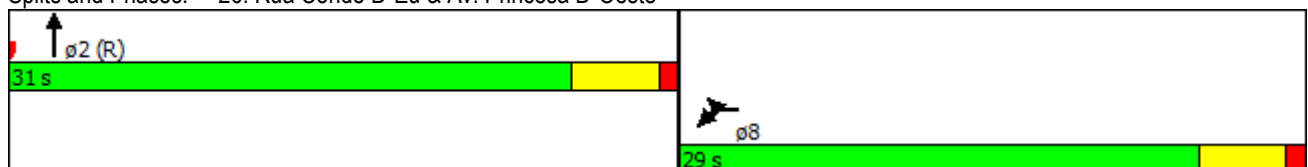


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|--------|------|------|
| Approach LOS | C | | | B |
| Stops (vph) | 747 | 346 | | 1394 |
| Fuel Used(l) | 40 | 22 | | 60 |
| CO Emissions (g/hr) | 749 | 418 | | 1115 |
| NOx Emissions (g/hr) | 145 | 81 | | 215 |
| VOC Emissions (g/hr) | 173 | 96 | | 257 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 46.9 | 48.7 | | 39.8 |
| Queue Length 95th (m) | 67.4 | #101.6 | | 46.6 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1266 | 549 | | 2130 |
| Starvation Cap Reductn | 0 | 0 | | 21 |
| Spillback Cap Reductn | 115 | 20 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.83 | 0.85 | | 0.85 |

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 30 (50%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 18.2
 Intersection LOS: B
 Intersection Capacity Utilization 77.5%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1178 | 1542 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1178 | 1542 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 92.0 | 92.0 | 8.0 |
| Total Split (%) | | | | | 92.0% | 92.0% | 8% |
| Maximum Green (s) | | | | | 86.0 | 86.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 86.0 | 86.0 | |
| Actuated g/C Ratio | | | | | 0.86 | 0.86 | |
| v/c Ratio | | | | | 0.43 | 0.38 | |
| Control Delay | | | | | 2.1 | 1.7 | |
| Queue Delay | | | | | 1.9 | 1.1 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 4.0 | 2.8 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 3.3 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 203 | 247 | |
| Fuel Used(l) | | | | | 15 | 19 | |
| CO Emissions (g/hr) | | | | | 283 | 355 | |
| NOx Emissions (g/hr) | | | | | 55 | 68 | |
| VOC Emissions (g/hr) | | | | | 65 | 82 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 17.2 | 14.8 | |
| Queue Length 95th (m) | | | | | 21.9 | 17.8 | |
| Internal Link Dist (m) | 0.1 | | 254.1 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2743 | 4063 | |
| Starvation Cap Reductn | | | | | 1351 | 2157 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.85 | 0.81 | |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 96 (96%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.43 |
| Intersection Signal Delay: | 3.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 61.0% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↙ | ↘ | ↗ | | |
| Volume (vph) | 0 | 1956 | 0 | 0 | 1650 | 262 | 366 | 851 | 66 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Flt | | | | | 0.979 | | | 0.999 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 100% | 113% | 113% | 113% | 113% | 100% | 100% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 6% | 2% | 2% | 4% | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2038 | 0 | 0 | 1942 | 308 | 381 | 886 | 78 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 2038 | 0 | 0 | 2250 | 0 | 381 | 894 | 70 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 49.0 | | | 49.0 | | 51.0 | 51.0 | 51.0 | | |
| Total Split (%) | | 49.0% | | | 49.0% | | 51.0% | 51.0% | 51.0% | | |
| Maximum Green (s) | | 44.0 | | | 45.0 | | 46.0 | 46.0 | 46.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 44.0 | | | 45.0 | | 46.0 | 46.0 | 46.0 | | |
| Actuated g/C Ratio | | 0.44 | | | 0.45 | | 0.46 | 0.46 | 0.46 | | |
| v/c Ratio | | 1.01 | | | 1.09 | | 0.48 | 1.13 | 0.10 | | |
| Control Delay | | 31.7 | | | 76.3 | | 17.2 | 98.4 | 13.2 | | |
| Queue Delay | | 35.2 | | | 0.0 | | 48.7 | 0.2 | 11.1 | | |
| Total Delay | | 66.9 | | | 76.3 | | 65.8 | 98.7 | 24.3 | | |
| LOS | | E | | | E | | E | F | C | | |
| Approach Delay | | 66.9 | | | 76.3 | | | 85.5 | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

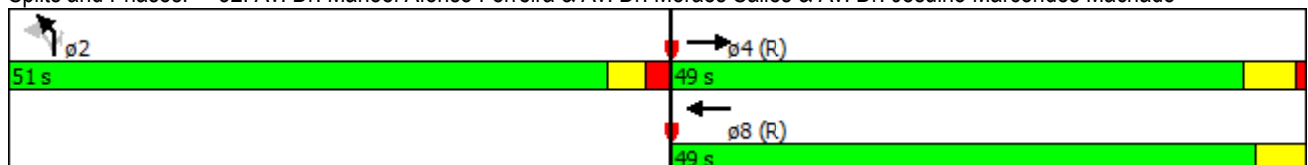


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|---------|-----|-----|--------|-----|------|--------|-------|------|-----|
| Approach LOS | | E | | | E | | | F | | | |
| Stops (vph) | | 1621 | | | 1873 | | 207 | 731 | 28 | | |
| Fuel Used(l) | | 95 | | | 209 | | 11 | 84 | 2 | | |
| CO Emissions (g/hr) | | 1765 | | | 3893 | | 201 | 1571 | 29 | | |
| NOx Emissions (g/hr) | | 341 | | | 751 | | 39 | 303 | 6 | | |
| VOC Emissions (g/hr) | | 407 | | | 898 | | 46 | 362 | 7 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | ~130.6 | | | ~190.1 | | 38.6 | ~217.4 | 6.6 | | |
| Queue Length 95th (m) | | m#168.5 | | | #220.7 | | 61.7 | #294.2 | m10.6 | | |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 13.6 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 2018 | | | 2068 | | 787 | 788 | 668 | | |
| Starvation Cap Reductn | | 542 | | | 0 | | 433 | 31 | 567 | | |
| Spillback Cap Reductn | | 0 | | | 0 | | 112 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 1.38 | | | 1.09 | | 1.08 | 1.18 | 0.69 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 23 (23%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 100
 Control Type: Pretimed
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 75.1
 Intersection LOS: E
 Intersection Capacity Utilization 176.1%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↑↕ | |
| Volume (vph) | 427 | 220 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 761 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Frnt | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.969 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Flt Permitted | | 0.969 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Right Turn on Red | No | | No | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 155.6 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 11.2 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 445 | 259 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 896 | 66 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 704 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 962 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 40.0 | 40.0 | | | | | | | | 60.0 | |
| Total Split (%) | 40.0% | 40.0% | | | | | | | | 60.0% | |
| Maximum Green (s) | 36.0 | 36.0 | | | | | | | | 56.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 4.0 | | | | | | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 36.0 | | | | | | | | 56.0 | |
| Actuated g/C Ratio | | 0.36 | | | | | | | | 0.56 | |
| v/c Ratio | | 0.59 | | | | | | | | 0.65 | |
| Control Delay | | 33.2 | | | | | | | | 17.9 | |
| Queue Delay | | 4.4 | | | | | | | | 0.1 | |
| Total Delay | | 37.6 | | | | | | | | 18.0 | |
| LOS | | D | | | | | | | | B | |
| Approach Delay | | 37.6 | | | | | | | | | |



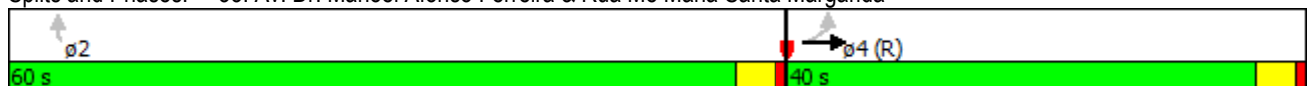
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|------------------------|-----|-------|-----|-----|------|-----|------|-----|-------|------|------|
| Approach LOS | | D | | | | | | | | | |
| Stops (vph) | | 581 | | | | | | | | 614 | |
| Fuel Used(l) | | 31 | | | | | | | | 40 | |
| CO Emissions (g/hr) | | 585 | | | | | | | | 746 | |
| NOx Emissions (g/hr) | | 113 | | | | | | | | 144 | |
| VOC Emissions (g/hr) | | 135 | | | | | | | | 172 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | |
| Queue Length 50th (m) | | 67.8 | | | | | | | | 72.7 | |
| Queue Length 95th (m) | | m82.3 | | | | | | | | 96.4 | |
| Internal Link Dist (m) | | 0.1 | | | 49.4 | | 13.6 | | 131.6 | | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 1184 | | | | | | | | 1478 | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | |
| Spillback Cap Reductn | | 394 | | | | | | | | 56 | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.89 | | | | | | | | 0.68 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 31 (31%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.65 |
| Intersection Signal Delay: | 26.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 62.6% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

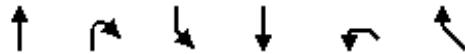
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 858 | 0 | 1147 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 208.9 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.0 | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 894 | 0 | 1195 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 894 | 0 | 1195 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

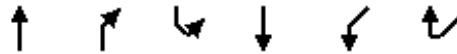
Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

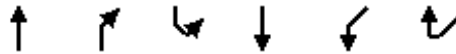
Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|-------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2109 | 1130 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3239 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 122.0 | | | | | | 8.0 |
| Total Split (%) | 93.8% | | | | | | 6% |
| Maximum Green (s) | 116.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 116.0 | | | | | | |
| Actuated g/C Ratio | 0.89 | | | | | | |
| v/c Ratio | 0.79 | | | | | | |
| Control Delay | 2.2 | | | | | | |
| Queue Delay | 46.4 | | | | | | |
| Total Delay | 48.7 | | | | | | |
| LOS | D | | | | | | |

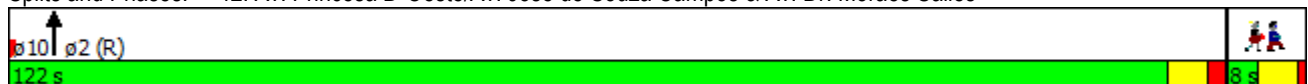


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|-----|------|------|-----|-----|
| Approach Delay | 48.7 | | | | | | |
| Approach LOS | D | | | | | | |
| Stops (vph) | 831 | | | | | | |
| Fuel Used(l) | 44 | | | | | | |
| CO Emissions (g/hr) | 813 | | | | | | |
| NOx Emissions (g/hr) | 157 | | | | | | |
| VOC Emissions (g/hr) | 188 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 52.1 | | | | | | |
| Queue Length 95th (m) | m49.0 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 4087 | | | | | | |
| Starvation Cap Reductn | 1152 | | | | | | |
| Spillback Cap Reductn | 416 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.10 | | | | | | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 130 |
| Offset: | 45 (35%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.79 |
| Intersection Signal Delay: | 48.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 68.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| m Volume for 95th percentile queue is metered by upstream signal. | |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | 0.993 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 306 | 145 | 0 | 2109 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 10% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 321 | 130 | 0 | 2109 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 34.0 | 34.0 | 96.0 | 96.0 | | | | |
| Total Split (%) | | | | | 26.2% | 26.2% | 73.8% | 73.8% | | | | |
| Maximum Green (s) | | | | | 29.0 | 29.0 | 90.0 | 90.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 29.0 | 29.0 | | 90.0 | | | | |
| Actuated g/C Ratio | | | | | 0.22 | 0.22 | | 0.69 | | | | |
| v/c Ratio | | | | | 0.45 | 0.42 | | 0.63 | | | | |
| Control Delay | | | | | 45.9 | 48.4 | | 7.7 | | | | |
| Queue Delay | | | | | 0.0 | 673.7 | | 4.0 | | | | |
| Total Delay | | | | | 45.9 | 722.1 | | 11.7 | | | | |
| LOS | | | | | D | F | | B | | | | |
| Approach Delay | | | | | 240.8 | | | 11.7 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

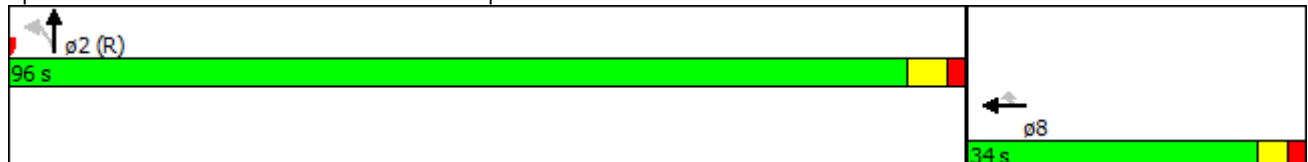


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|--------|-----|------|-----|-----|------|-----|
| Approach LOS | | | | | F | | | B | | | | |
| Stops (vph) | | | | | 260 | 107 | | 806 | | | | |
| Fuel Used(l) | | | | | 19 | 8 | | 42 | | | | |
| CO Emissions (g/hr) | | | | | 349 | 147 | | 785 | | | | |
| NOx Emissions (g/hr) | | | | | 67 | 28 | | 152 | | | | |
| VOC Emissions (g/hr) | | | | | 80 | 34 | | 181 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 41.3 | 33.2 | | 55.8 | | | | |
| Queue Length 95th (m) | | | | | 57.1 | 56.2 | | 63.0 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 721 | 306 | | 3368 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 1159 | | | | |
| Spillback Cap Reductn | | | | | 0 | 306 | | 852 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.45 | 130.00 | | 0.95 | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 130 |
| Offset: | 45 (35%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.63 |
| Intersection Signal Delay: | 52.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 68.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 725 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.948 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1542 | 3239 | 1658 | 4456 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1542 | 3239 | 1658 | 4456 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 213.6 | |
| Travel Time (s) | | 2.4 | | 15.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 211 | 454 | 815 | 1618 | 853 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 190 | 475 | 815 | 2471 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 33.0 | 33.0 | 97.0 | 97.0 | |
| Total Split (%) | 25.4% | 25.4% | 74.6% | 74.6% | |
| Maximum Green (s) | 29.0 | 29.0 | 93.0 | 93.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 29.0 | 29.0 | 93.0 | 93.0 | |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.72 | 0.72 | |
| v/c Ratio | 0.55 | 0.66 | 0.69 | 0.78 | |
| Control Delay | 51.9 | 51.0 | 14.1 | 14.0 | |
| Queue Delay | 29.9 | 3.4 | 0.0 | 22.3 | |

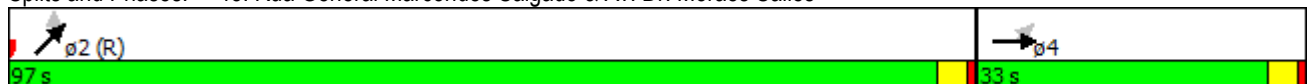


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|-------|-------|-----|
| Total Delay | 81.8 | 54.4 | 14.1 | 36.3 | |
| LOS | F | D | B | D | |
| Approach Delay | | 62.2 | | 30.8 | |
| Approach LOS | | E | | C | |
| Stops (vph) | 159 | 408 | 425 | 1433 | |
| Fuel Used(l) | 11 | 28 | 34 | 106 | |
| CO Emissions (g/hr) | 212 | 530 | 631 | 1968 | |
| NOx Emissions (g/hr) | 41 | 102 | 122 | 380 | |
| VOC Emissions (g/hr) | 49 | 122 | 145 | 454 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 50.3 | 64.5 | 110.6 | 140.1 | |
| Queue Length 95th (m) | 78.6 | 85.1 | 155.6 | 159.3 | |
| Internal Link Dist (m) | | 9.3 | | 189.6 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 343 | 722 | 1186 | 3187 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 150 | 158 | 0 | 812 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.98 | 0.84 | 0.69 | 1.04 | |

Intersection Summary

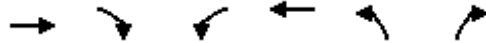
| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 130 |
| Offset: | 97 (75%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.78 |
| Intersection Signal Delay: | 36.1 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 67.1% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019



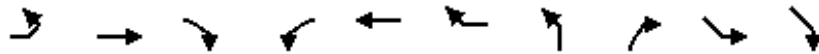
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.996 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1269 | 39 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1308 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 27.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Colombo



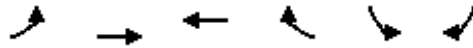
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2 | 32 | 815 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2 | 32 | 815 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↘ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 663 | 0 | 0 | 2 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 663 | 0 | 0 | 2 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 47.9% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr't | | 0.850 | | | 0.978 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1269 | 0 | 0 | 1451 | 252 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1269 | 0 | 0 | 1703 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 66.0 | | | 64.0 | | | |
| Total Split (%) | | 50.8% | | | 49.2% | | | |
| Maximum Green (s) | | 62.0 | | | 60.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 62.0 | | | 60.0 | | | |
| Actuated g/C Ratio | | 0.48 | | | 0.46 | | | |
| v/c Ratio | | 0.77 | | | 0.79 | | | |
| Control Delay | | 34.6 | | | 8.8 | | | |
| Queue Delay | | 0.0 | | | 0.1 | | | |
| Total Delay | | 34.6 | | | 8.9 | | | |
| LOS | | C | | | A | | | |
| Approach Delay | | | | | 8.9 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

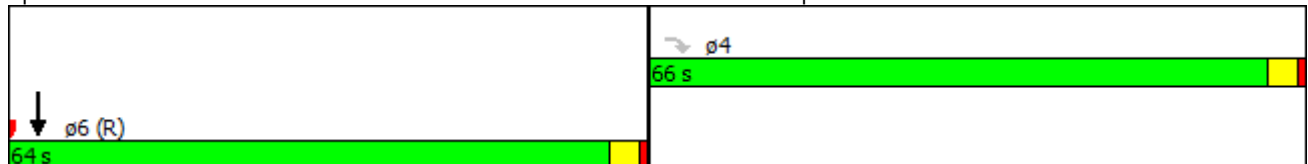


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|-------|-----|------|------|-----|------|-----|
| Approach LOS | | | | | A | | | |
| Stops (vph) | | 1087 | | | 956 | | | |
| Fuel Used(l) | | 61 | | | 42 | | | |
| CO Emissions (g/hr) | | 1143 | | | 774 | | | |
| NOx Emissions (g/hr) | | 221 | | | 149 | | | |
| VOC Emissions (g/hr) | | 264 | | | 178 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 139.3 | | | 32.6 | | | |
| Queue Length 95th (m) | | 156.7 | | | 35.5 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1648 | | | 2144 | | | |
| Starvation Cap Reductn | | 0 | | | 29 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.77 | | | 0.81 | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 130 |
| Actuated Cycle Length: | 130 |
| Offset: | 54 (42%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.79 |
| Intersection Signal Delay: | 19.8 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 67.4% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



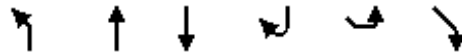
Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↖ | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 39 | 252 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 39 | 252 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 23.4% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 128.3 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.2 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 40 | 1272 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1312 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 136.8 | | | 22.0 |
| Travel Time (s) | 2.4 | | 9.8 | | | 1.6 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 40 | 0 | 0 | 0 | 0 | 1019 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 40 | 0 | 0 | 0 | 0 | 1019 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.0% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 709 | 0 | 0 | 1086 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 709 | 0 | 0 | 1086 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 31.0 | | | 29.0 | | |
| Total Split (%) | 51.7% | | | 48.3% | | |
| Maximum Green (s) | 24.0 | | | 24.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 24.0 | | | 24.0 | | |
| Actuated g/C Ratio | 0.40 | | | 0.40 | | |
| v/c Ratio | 0.53 | | | 0.55 | | |
| Control Delay | 1.2 | | | 15.2 | | |
| Queue Delay | 0.8 | | | 5.4 | | |
| Total Delay | 2.0 | | | 20.5 | | |
| LOS | A | | | C | | |
| Approach Delay | 2.0 | | | 20.5 | | |
| Approach LOS | A | | | C | | |
| Stops (vph) | 16 | | | 751 | | |

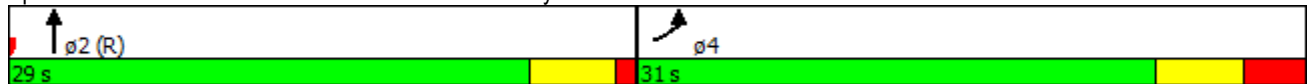


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | 3 | | | 36 | | |
| CO Emissions (g/hr) | 63 | | | 665 | | |
| NOx Emissions (g/hr) | 12 | | | 128 | | |
| VOC Emissions (g/hr) | 14 | | | 153 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 0.2 | | | 34.1 | | |
| Queue Length 95th (m) | m0.2 | | | 45.7 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1327 | | | 1966 | | |
| Starvation Cap Reductn | 320 | | | 806 | | |
| Spillback Cap Reductn | 38 | | | 199 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 0.70 | | | 0.94 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 33 (55%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 13.2 Intersection LOS: B
 Intersection Capacity Utilization 112.2% ICU Level of Service H
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

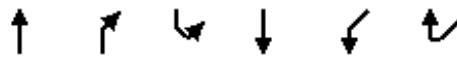
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



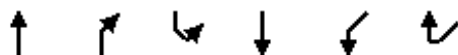
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1606 | 538 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1606 | 538 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 37.0 | 23.0 | |
| Total Split (%) | | | | 61.7% | 38.3% | |
| Maximum Green (s) | | | | 32.0 | 19.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 4.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 32.0 | 19.0 | |
| Actuated g/C Ratio | | | | 0.53 | 0.32 | |
| v/c Ratio | | | | 0.61 | 0.51 | |
| Control Delay | | | | 2.8 | 3.9 | |
| Queue Delay | | | | 0.1 | 0.0 | |
| Total Delay | | | | 2.9 | 3.9 | |
| LOS | | | | A | A | |
| Approach Delay | | | | 2.9 | 3.9 | |
| Approach LOS | | | | A | A | |
| Stops (vph) | | | | 166 | 210 | |



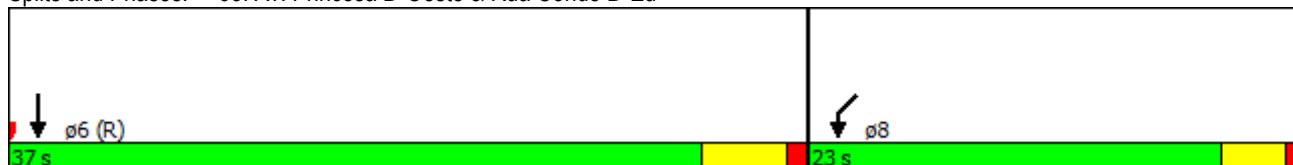
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | | | | 13 | 8 | |
| CO Emissions (g/hr) | | | | 239 | 145 | |
| NOx Emissions (g/hr) | | | | 46 | 28 | |
| VOC Emissions (g/hr) | | | | 55 | 34 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 6.2 | 1.4 | |
| Queue Length 95th (m) | | | | 7.4 | m4.4 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2621 | 1051 | |
| Starvation Cap Reductn | | | | 128 | 0 | |
| Spillback Cap Reductn | | | | 248 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 0.68 | 0.51 | |

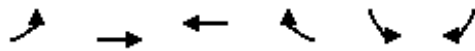
Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 60 |
| Actuated Cycle Length: | 60 |
| Offset: | 29 (48%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.61 |
| Intersection Signal Delay: | 3.2 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 52.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu





| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 438 | 5 | 0 | 13 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 443 | 0 | 0 | 13 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 21.8% ICU Level of Service A |
| Analysis Period (min) | 15 |

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1829 | 0 | 0 | 0 | 0 | 2254 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1829 | 0 | 0 | 0 | 0 | 2254 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 58.0 | | | | | 72.0 |
| Total Split (%) | 44.6% | | | | | 55.4% |
| Maximum Green (s) | 54.0 | | | | | 66.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 54.0 | | | | | 66.0 |
| Actuated g/C Ratio | 0.42 | | | | | 0.51 |
| v/c Ratio | 1.27 | | | | | 1.29 |
| Control Delay | 144.6 | | | | | 156.3 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 144.6 | | | | | 156.3 |
| LOS | F | | | | | F |
| Approach Delay | 144.6 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|--------|-----|-----|------|------|--------|
| Approach LOS | F | | | | | |
| Stops (vph) | 1415 | | | | | 1692 |
| Fuel Used(l) | 234 | | | | | 306 |
| CO Emissions (g/hr) | 4352 | | | | | 5699 |
| NOx Emissions (g/hr) | 840 | | | | | 1100 |
| VOC Emissions (g/hr) | 1004 | | | | | 1314 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | ~330.7 | | | | | ~339.9 |
| Queue Length 95th (m) | #370.6 | | | | | #376.0 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1435 | | | | | 1753 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.27 | | | | | 1.29 |

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 120 (92%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 151.1 Intersection LOS: F
 Intersection Capacity Utilization 107.3% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Macedo

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1882 | 327 | 0 | 2230 | 0 | 65 | 658 | 112 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3081 | 1351 | 0 | 4677 | 0 | 0 | 3275 | 1500 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3081 | 1351 | 0 | 4677 | 0 | 0 | 3275 | 1500 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 92.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 6.6 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 4% | 2% | 4% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1960 | 385 | 0 | 2323 | 0 | 77 | 685 | 132 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1999 | 346 | 0 | 2323 | 0 | 0 | 762 | 132 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 71.0 | 71.0 | | 71.0 | | 29.0 | 29.0 | 29.0 | | |
| Total Split (%) | | 71.0% | 71.0% | | 71.0% | | 29.0% | 29.0% | 29.0% | | |
| Maximum Green (s) | | 67.0 | 67.0 | | 66.0 | | 24.0 | 24.0 | 24.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 67.0 | 67.0 | | 66.0 | | 24.0 | 24.0 | 24.0 | | |
| Actuated g/C Ratio | | 0.67 | 0.67 | | 0.66 | | 0.24 | 0.24 | 0.24 | | |
| v/c Ratio | | 0.97 | 0.38 | | 0.75 | | 0.97 | 0.37 | 0.37 | | |
| Control Delay | | 30.2 | 8.8 | | 4.7 | | 64.1 | 35.2 | 35.2 | | |
| Queue Delay | | 43.0 | 0.0 | | 10.4 | | 1.9 | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

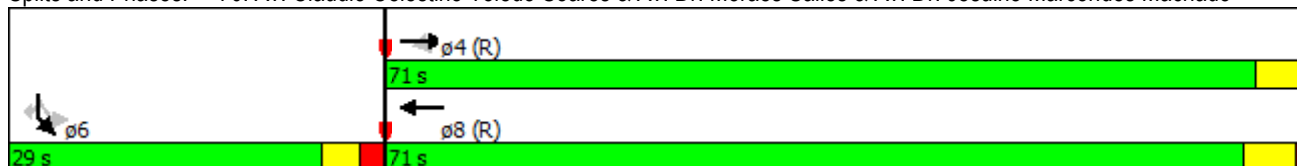


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|------|-----|-------|-----|------|--------|------|------|-----|
| Total Delay | | 73.2 | 8.8 | | 15.1 | | | 66.0 | 35.2 | | |
| LOS | | E | A | | B | | | E | D | | |
| Approach Delay | | 63.7 | | | 15.1 | | | 61.5 | | | |
| Approach LOS | | E | | | B | | | E | | | |
| Stops (vph) | | 1541 | 139 | | 374 | | | 651 | 105 | | |
| Fuel Used(l) | | 96 | 8 | | 29 | | | 55 | 7 | | |
| CO Emissions (g/hr) | | 1784 | 154 | | 536 | | | 1025 | 122 | | |
| NOx Emissions (g/hr) | | 344 | 30 | | 103 | | | 198 | 24 | | |
| VOC Emissions (g/hr) | | 412 | 36 | | 124 | | | 236 | 28 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | 187.8 | 30.6 | | 28.7 | | | 79.6 | 22.5 | | |
| Queue Length 95th (m) | | #273.0 | 48.6 | | m25.0 | | | #118.4 | 40.4 | | |
| Internal Link Dist (m) | | 68.3 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 2064 | 905 | | 3086 | | | 786 | 360 | | |
| Starvation Cap Reductn | | 0 | 0 | | 770 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 607 | 0 | | 0 | | | 9 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.37 | 0.38 | | 1.00 | | | 0.98 | 0.37 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 6 (6%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 43.1 Intersection LOS: D
 Intersection Capacity Utilization 176.1% ICU Level of Service H
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

21/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | 0.952 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3257 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Confl. Peds. (#/hr) | | | | 946 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Adj. Flow (vph) | 0 | 493 | 697 | 326 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 493 | 1023 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 55.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.997 | | | 0.997 | | | 0.983 | | | 0.915 | |
| Flt Protected | | 0.978 | | | 0.990 | | | 0.990 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 3199 | 0 | 0 | 3037 | 0 |
| Flt Permitted | | 0.978 | | | 0.990 | | | 0.872 | | | 0.923 | |
| Satd. Flow (perm) | 0 | 3188 | 0 | 0 | 3254 | 0 | 0 | 2818 | 0 | 0 | 2815 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 103.9 | | | 88.6 | | | 99.0 | | | 99.0 | |
| Travel Time (s) | | 7.5 | | | 6.4 | | | 7.1 | | | 7.1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 4% | 0% | 2% | 2% | 9% | 0% | 2% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 429 | 497 | 20 | 111 | 411 | 12 | 29 | 103 | 17 | 8 | 39 | 61 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 946 | 0 | 0 | 534 | 0 | 0 | 149 | 0 | 0 | 108 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | | 6 |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 19.0 | 19.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 34.0 | 34.0 | | 23.0 | 23.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 48.6% | 48.6% | | 32.9% | 32.9% | | 18.6% | 18.6% | | 18.6% | 18.6% | |
| Maximum Green (s) | 28.0 | 28.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lead | Lead | | Lag | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 28.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.40 | | | 0.24 | | | 0.11 | | | 0.11 | |
| v/c Ratio | | 0.74 | | | 0.68 | | | 0.46 | | | 0.34 | |
| Control Delay | | 22.3 | | | 29.0 | | | 34.1 | | | 31.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 22.3 | | | 29.0 | | | 34.1 | | | 31.8 | |
| LOS | | C | | | C | | | C | | | C | |
| Approach Delay | | 22.3 | | | 29.0 | | | 34.1 | | | 31.8 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

21/11/2019

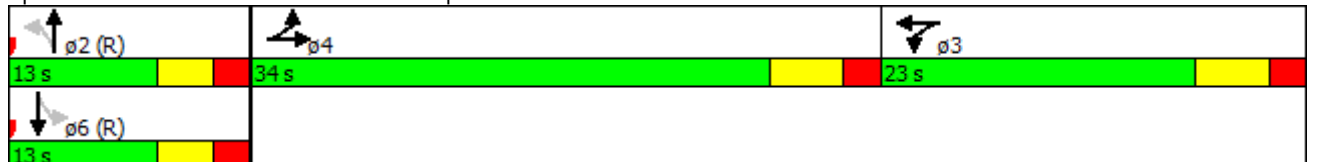


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | C | | | C | | | C | | | C | |
| Stops (vph) | | 740 | | | 448 | | | 130 | | | 92 | |
| Fuel Used(l) | | 48 | | | 39 | | | 8 | | | 6 | |
| CO Emissions (g/hr) | | 896 | | | 733 | | | 149 | | | 104 | |
| NOx Emissions (g/hr) | | 173 | | | 142 | | | 29 | | | 20 | |
| VOC Emissions (g/hr) | | 207 | | | 169 | | | 34 | | | 24 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 56.6 | | | 35.1 | | | 10.3 | | | 7.3 | |
| Queue Length 95th (m) | | 78.7 | | | 51.4 | | | 19.1 | | | 14.6 | |
| Internal Link Dist (m) | | 79.9 | | | 64.6 | | | 75.0 | | | 75.0 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1275 | | | 790 | | | 322 | | | 321 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.74 | | | 0.68 | | | 0.46 | | | 0.34 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 70 |
| Actuated Cycle Length: | 70 |
| Offset: | 34 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.74 |
| Intersection Signal Delay: | 26.0 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 62.5% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

21/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 3.3 | 3.3 | 3.3 | 3.3 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.986 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4750 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.5 | | | 136.1 | 278.1 | |
| Travel Time (s) | 10.3 | | | 9.8 | 20.0 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1189 | 121 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1310 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 28.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.992 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3295 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3295 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4821 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 46.8 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 3.4 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% |
| Adj. Flow (vph) | 0 | 471 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | 791 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 496 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 22.0 | 22.0 | |
| Total Split (s) | | 39.0 | | | | | | | | 51.0 | 51.0 | |
| Total Split (%) | | 43.3% | | | | | | | | 56.7% | 56.7% | |
| Maximum Green (s) | | 32.0 | | | | | | | | 46.0 | 46.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 32.0 | | | | | | | | | 46.0 | |
| Actuated g/C Ratio | | 0.36 | | | | | | | | | 0.51 | |
| v/c Ratio | | 0.42 | | | | | | | | | 0.48 | |
| Control Delay | | 23.4 | | | | | | | | | 2.1 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.6 | |
| Total Delay | | 23.4 | | | | | | | | | 2.7 | |
| LOS | | C | | | | | | | | | A | |
| Approach Delay | | 23.4 | | | | | | | | | 2.7 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| Approach LOS | | C | | | | | | | | | A | |
| Stops (vph) | | 346 | | | | | | | | | 163 | |
| Fuel Used(l) | | 18 | | | | | | | | | 10 | |
| CO Emissions (g/hr) | | 343 | | | | | | | | | 193 | |
| NOx Emissions (g/hr) | | 66 | | | | | | | | | 37 | |
| VOC Emissions (g/hr) | | 79 | | | | | | | | | 44 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | 0 | |
| Queue Length 50th (m) | | 35.5 | | | | | | | | | 3.1 | |
| Queue Length 95th (m) | | 49.6 | | | | | | | | | 3.6 | |
| Internal Link Dist (m) | | 22.8 | | | | 7.7 | | 0.1 | | | 21.2 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1171 | | | | | | | | | 2464 | |
| Starvation Cap Reductn | | 0 | | | | | | | | | 802 | |
| Spillback Cap Reductn | | 0 | | | | | | | | | 667 | |
| Storage Cap Reductn | | 0 | | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.42 | | | | | | | | | 0.71 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 3 (3%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.48 |
| Intersection Signal Delay: | 8.8 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 45.6% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.948 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4676 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.2 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 4.2 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1185 | 636 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1821 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 34.0 | | | | | | | | | 56.0 | |
| Total Split (%) | | 37.8% | | | | | | | | | 62.2% | |
| Maximum Green (s) | | 27.0 | | | | | | | | | 51.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 27.0 | | | | | | | | | 51.0 | |
| Actuated g/C Ratio | | 0.30 | | | | | | | | | 0.57 | |
| v/c Ratio | | 0.61 | | | | | | | | | 0.69 | |
| Control Delay | | 30.0 | | | | | | | | | 11.8 | |
| Queue Delay | | 0.0 | | | | | | | | | 0.0 | |
| Total Delay | | 30.0 | | | | | | | | | 11.8 | |
| LOS | | C | | | | | | | | | B | |
| Approach Delay | | 30.0 | | | | | | | | | 11.8 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|------|-----|------|-----|-----|------|------|
| Approach LOS | | C | | | | | | | | | | B |
| Stops (vph) | | 479 | | | | | | | | | | 1184 |
| Fuel Used(l) | | 27 | | | | | | | | | | 54 |
| CO Emissions (g/hr) | | 507 | | | | | | | | | | 1001 |
| NOx Emissions (g/hr) | | 98 | | | | | | | | | | 193 |
| VOC Emissions (g/hr) | | 117 | | | | | | | | | | 231 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 49.0 | | | | | | | | | | 49.3 |
| Queue Length 95th (m) | | 66.9 | | | | | | | | | | 52.0 |
| Internal Link Dist (m) | | 34.2 | | | | 12.6 | | 21.2 | | | 44.4 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 995 | | | | | | | | | | 2649 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.61 | | | | | | | | | | 0.69 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 89 (99%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.69 |
| Intersection Signal Delay: | 16.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 61.6% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 179 | 1185 | 4 | 441 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1589 | 4911 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1589 | 4911 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 136.1 | | 31.2 |
| Travel Time (s) | | 9.8 | | 2.2 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 0% | 2% | 0% | 3% |
| Adj. Flow (vph) | 179 | 1185 | 4 | 441 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 179 | 1189 | 0 | 441 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 55.0 | | 35.0 |
| Total Split (%) | | 61.1% | | 38.9% |
| Maximum Green (s) | | 50.0 | | 30.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 90.0 | 50.0 | | 30.0 |
| Actuated g/C Ratio | 1.00 | 0.56 | | 0.33 |
| v/c Ratio | 0.11 | 0.44 | | 0.39 |
| Control Delay | 0.1 | 7.3 | | 5.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.1 | 7.4 | | 5.0 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

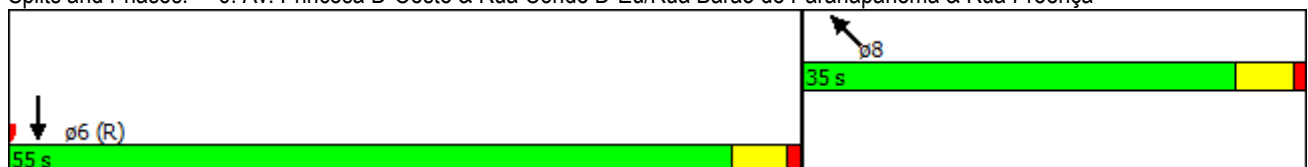


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | A | | A |
| Approach Delay | | 7.4 | | 5.0 |
| Approach LOS | | A | | A |
| Stops (vph) | 0 | 513 | | 201 |
| Fuel Used(l) | 1 | 33 | | 7 |
| CO Emissions (g/hr) | 11 | 608 | | 138 |
| NOx Emissions (g/hr) | 2 | 117 | | 27 |
| VOC Emissions (g/hr) | 3 | 140 | | 32 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 23.5 | | 6.3 |
| Queue Length 95th (m) | 0.0 | 41.3 | | 10.1 |
| Internal Link Dist (m) | | 112.1 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1589 | 2728 | | 1129 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 27 | 86 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.11 | 0.45 | | 0.39 |

Intersection Summary

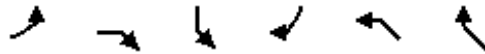
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 2 (2%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.44 |
| Intersection Signal Delay: | 6.1 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 42.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

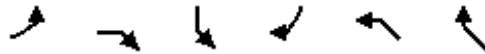


Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

21/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 4% | | 4% | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3255 | 0 | 0 | 0 | 0 | 3420 |
| Right Turn on Red | No | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1001 | 0 | 0 | 0 | 0 | 1751 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Turn Type | Prot | | | | | Perm |
| Protected Phases | 4 | | | | | |
| Permitted Phases | | | | | | 2 |
| Minimum Split (s) | 22.0 | | | | | 22.0 |
| Total Split (s) | 36.0 | | | | | 54.0 |
| Total Split (%) | 40.0% | | | | | 60.0% |
| Maximum Green (s) | 30.0 | | | | | 48.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 6.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 30.0 | | | | | 48.0 |
| Actuated g/C Ratio | 0.33 | | | | | 0.53 |
| v/c Ratio | 0.92 | | | | | 0.96 |
| Control Delay | 37.0 | | | | | 20.4 |
| Queue Delay | 1.7 | | | | | 3.4 |
| Total Delay | 38.7 | | | | | 23.8 |
| LOS | D | | | | | C |
| Approach Delay | 38.7 | | | | | |



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR |
|------------------------|--------|-----|------|-----|-------|--------|
| Approach LOS | D | | | | | |
| Stops (vph) | 808 | | | | | 1212 |
| Fuel Used(l) | 48 | | | | | 125 |
| CO Emissions (g/hr) | 886 | | | | | 2326 |
| NOx Emissions (g/hr) | 171 | | | | | 449 |
| VOC Emissions (g/hr) | 204 | | | | | 537 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 76.8 | | | | | 147.0 |
| Queue Length 95th (m) | #128.5 | | | | | #183.1 |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1085 | | | | | 1824 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 26 | | | | | 48 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.95 | | | | | 0.99 |

Intersection Summary

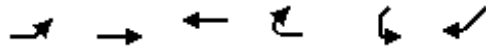
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 83 (92%), Referenced to phase 4:EBL, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.96 |
| Intersection Signal Delay: | 29.2 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 76.6% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |
| # 95th percentile volume exceeds capacity, queue may be longer. | |
| Queue shown is maximum after two cycles. | |

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2720 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 46.8 | | 58.2 | |
| Travel Time (s) | | 6.6 | 3.4 | | 4.2 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 602 | 546 | 0 | 0 | 0 | 636 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 35.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.998 | | | 0.986 | | | 0.937 | | | 0.931 | |
| Flt Protected | | 0.981 | | | 0.987 | | | | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1948 | 0 | 0 | 1904 | 0 |
| Flt Permitted | | 0.981 | | | 0.987 | | | | | | 0.997 | |
| Satd. Flow (perm) | 0 | 1918 | 0 | 0 | 1935 | 0 | 0 | 1948 | 0 | 0 | 1904 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 279.3 | | | 122.7 | | | 120.4 | | | 107.5 | |
| Travel Time (s) | | 20.1 | | | 8.8 | | | 8.7 | | | 7.7 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 1% | 4% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 8% | 2% | 1% |
| Adj. Flow (vph) | 167 | 261 | 7 | 71 | 179 | 29 | 5 | 265 | 236 | 26 | 191 | 224 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 435 | 0 | 0 | 279 | 0 | 0 | 506 | 0 | 0 | 441 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 82.4% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

21/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 490 | 484 | 544 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Frt | | | | 0.865 | 0.921 | |
| Flt Protected | | | | | 0.977 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1746 | 3160 | 0 |
| Flt Permitted | | | | | 0.977 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1746 | 3160 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 259.2 | | 40.3 | |
| Travel Time (s) | 2.3 | | 18.7 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 4% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 490 | 484 | 544 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 490 | 1028 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 33.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 260 | 1187 | 29 | 1554 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4703 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4703 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 193.3 | | 63.1 |
| Travel Time (s) | | 13.9 | | 4.5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 1% | 4% | 7% | 1% |
| Adj. Flow (vph) | 260 | 1187 | 29 | 1554 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 260 | 1216 | 0 | 1554 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 49.0 | 41.0 | | 49.0 |
| Total Split (%) | 54.4% | 45.6% | | 54.4% |
| Maximum Green (s) | 45.0 | 35.0 | | 44.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 45.0 | 35.0 | | 44.0 |
| Actuated g/C Ratio | 0.50 | 0.39 | | 0.49 |
| v/c Ratio | 0.16 | 0.67 | | 0.67 |
| Control Delay | 0.2 | 24.9 | | 13.3 |
| Queue Delay | 0.8 | 0.0 | | 5.5 |
| Total Delay | 1.0 | 24.9 | | 18.8 |
| LOS | A | C | | B |
| Approach Delay | | 24.9 | | 18.8 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

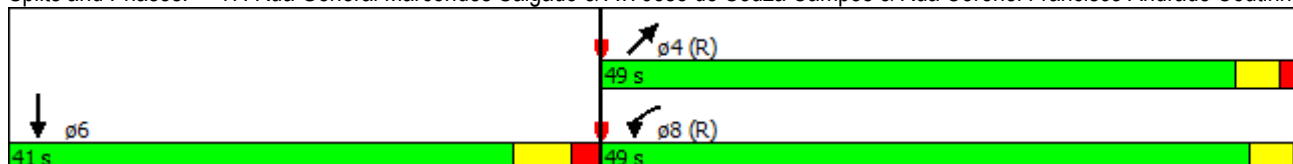


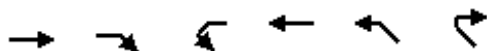
| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|-------|------|------|
| Approach LOS | | C | | B |
| Stops (vph) | 0 | 923 | | 1005 |
| Fuel Used(l) | 1 | 64 | | 47 |
| CO Emissions (g/hr) | 15 | 1198 | | 869 |
| NOx Emissions (g/hr) | 3 | 231 | | 168 |
| VOC Emissions (g/hr) | 3 | 276 | | 201 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 65.3 | | 51.6 |
| Queue Length 95th (m) | 0.0 | 81.2 | | 61.5 |
| Internal Link Dist (m) | | 169.3 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1675 | 1828 | | 2305 |
| Starvation Cap Reductn | 1118 | 0 | | 686 |
| Spillback Cap Reductn | 0 | 0 | | 86 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.47 | 0.67 | | 0.96 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 2 (2%), Referenced to phase 4:NET and 8:WBL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.67 |
| Intersection Signal Delay: | 19.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 71.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



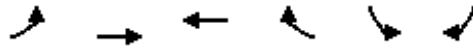


| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 621 | 380 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.943 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3234 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3234 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 32.5 | | | 18.4 | 61.1 | |
| Travel Time (s) | 2.3 | | | 1.3 | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 621 | 380 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1001 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.5% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

21/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1728 | 1837 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 1% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 90 | 179 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

21/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 0% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1728 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 3% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 445 | 90 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 30.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frts | | | | | | | | 0.969 | | | | |
| Flt Protected | | 0.996 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.996 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3408 | 0 | 0 | 0 | 0 | 0 | 4516 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 3% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 797 | 0 | 0 | 0 | 0 | 0 | 855 | 226 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 865 | 0 | 0 | 0 | 0 | 0 | 1081 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 21.0 | 21.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 46.0 | 46.0 | | | | | | 44.0 | | | | |
| Total Split (%) | 51.1% | 51.1% | | | | | | 48.9% | | | | |
| Maximum Green (s) | 41.0 | 41.0 | | | | | | 39.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 5.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 41.0 | | | | | | 39.0 | | | | |
| Actuated g/C Ratio | | 0.46 | | | | | | 0.43 | | | | |
| v/c Ratio | | 0.56 | | | | | | 0.55 | | | | |
| Control Delay | | 14.8 | | | | | | 20.3 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 14.8 | | | | | | 20.3 | | | | |
| LOS | | B | | | | | | C | | | | |
| Approach Delay | | 14.8 | | | | | | 20.3 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019

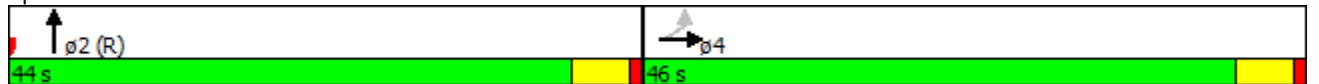


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|------------------------|-----|------|-----|-----|------|-----|-----|-----|------|-----|------|-----|--|
| Approach LOS | | B | | | | | | | C | | | | |
| Stops (vph) | | 435 | | | | | | | 738 | | | | |
| Fuel Used(l) | | 22 | | | | | | | 35 | | | | |
| CO Emissions (g/hr) | | 404 | | | | | | | 660 | | | | |
| NOx Emissions (g/hr) | | 78 | | | | | | | 127 | | | | |
| VOC Emissions (g/hr) | | 93 | | | | | | | 152 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | 0 | | | | |
| Queue Length 50th (m) | | 42.4 | | | | | | | 52.0 | | | | |
| Queue Length 95th (m) | | 52.7 | | | | | | | 65.5 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | | 3.3 | | 43.8 | | |
| Turn Bay Length (m) | | | | | | | | | | | | | |
| Base Capacity (vph) | | 1552 | | | | | | | 1956 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 0.56 | | | | | | | 0.55 | | | | |

Intersection Summary

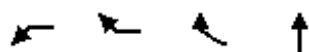
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.56 |
| Intersection Signal Delay: | 17.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 52.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

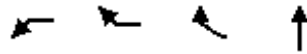


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

21/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 457 | 441 | 292 | 1525 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.935 | 0.850 | | |
| Flt Protected | 0.973 | | | |
| Satd. Flow (prot) | 3164 | 1373 | 0 | 4916 |
| Flt Permitted | 0.973 | | | |
| Satd. Flow (perm) | 3164 | 1373 | 0 | 4916 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 457 | 441 | 292 | 1525 |
| Shared Lane Traffic (%) | | 80% | | |
| Lane Group Flow (vph) | 810 | 380 | 0 | 1525 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 46.0 | 46.0 | | 44.0 |
| Total Split (%) | 51.1% | 51.1% | | 48.9% |
| Maximum Green (s) | 41.0 | 41.0 | | 39.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 41.0 | 41.0 | | 39.0 |
| Actuated g/C Ratio | 0.46 | 0.46 | | 0.43 |
| v/c Ratio | 0.56 | 0.61 | | 0.72 |
| Control Delay | 13.0 | 16.1 | | 17.2 |
| Queue Delay | 0.7 | 1.0 | | 0.4 |
| Total Delay | 13.7 | 17.1 | | 17.5 |
| LOS | B | B | | B |
| Approach Delay | 14.8 | | | 17.5 |

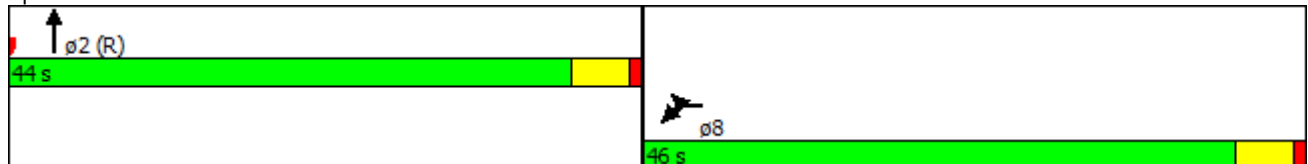


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|------|
| Approach LOS | B | | | B |
| Stops (vph) | 329 | 168 | | 1228 |
| Fuel Used(l) | 23 | 12 | | 56 |
| CO Emissions (g/hr) | 430 | 224 | | 1049 |
| NOx Emissions (g/hr) | 83 | 43 | | 202 |
| VOC Emissions (g/hr) | 99 | 52 | | 242 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 33.1 | 33.5 | | 69.5 |
| Queue Length 95th (m) | 42.2 | 49.4 | | 87.2 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1441 | 625 | | 2130 |
| Starvation Cap Reductn | 0 | 0 | | 190 |
| Spillback Cap Reductn | 315 | 87 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.72 | 0.71 | | 0.79 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 4 (4%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 16.3 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 67.1% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

21/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↔↔ | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Fr | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3190 | 4725 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 278.1 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.0 | | | 5.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 4% | 4% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1001 | 1310 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 82.0 | 82.0 | 8.0 |
| Total Split (%) | | | | | 91.1% | 91.1% | 9% |
| Maximum Green (s) | | | | | 76.0 | 76.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 76.0 | 76.0 | |
| Actuated g/C Ratio | | | | | 0.84 | 0.84 | |
| v/c Ratio | | | | | 0.37 | 0.33 | |
| Control Delay | | | | | 1.1 | 0.9 | |
| Queue Delay | | | | | 0.8 | 0.3 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 1.9 | 1.3 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 1.5 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 78 | 101 | |
| Fuel Used(l) | | | | | 10 | 13 | |
| CO Emissions (g/hr) | | | | | 187 | 242 | |
| NOx Emissions (g/hr) | | | | | 36 | 47 | |
| VOC Emissions (g/hr) | | | | | 43 | 56 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 6.3 | 5.8 | |
| Queue Length 95th (m) | | | | | 12.9 | 11.2 | |
| Internal Link Dist (m) | 0.1 | | 254.1 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2693 | 3990 | |
| Starvation Cap Reductn | | | | | 1115 | 1835 | |
| Spillback Cap Reductn | | | | | 1275 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.71 | 0.61 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 40 (44%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.37 |
| Intersection Signal Delay: | 1.5 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 54.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | ↘ | ↘ | ↘ | | |
| Volume (vph) | 0 | 1956 | 0 | 0 | 1865 | 296 | 366 | 851 | 75 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 0% | | 4% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Frnt | | | | | 0.979 | | | 0.999 | 0.850 | | |
| Flt Protected | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (prot) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | 0.953 | | | |
| Satd. Flow (perm) | 0 | 4588 | 0 | 0 | 4597 | 0 | 1711 | 1714 | 1454 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 37.6 | | 59.4 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 2.7 | | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 6% | 2% | 2% | 4% | 1% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1956 | 0 | 0 | 1865 | 296 | 366 | 851 | 75 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | 10% | | |
| Lane Group Flow (vph) | 0 | 1956 | 0 | 0 | 2161 | 0 | 366 | 859 | 67 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | |
| Permitted Phases | | | | | | | 2 | | 2 | | |
| Minimum Split (s) | | 21.0 | | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 44.0 | | | 44.0 | | 46.0 | 46.0 | 46.0 | | |
| Total Split (%) | | 48.9% | | | 48.9% | | 51.1% | 51.1% | 51.1% | | |
| Maximum Green (s) | | 39.0 | | | 40.0 | | 41.0 | 41.0 | 41.0 | | |
| Yellow Time (s) | | 4.0 | | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 1.0 | | | 0.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | 5.0 | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 39.0 | | | 40.0 | | 41.0 | 41.0 | 41.0 | | |
| Actuated g/C Ratio | | 0.43 | | | 0.44 | | 0.46 | 0.46 | 0.46 | | |
| v/c Ratio | | 0.98 | | | 1.06 | | 0.47 | 1.10 | 0.10 | | |
| Control Delay | | 24.9 | | | 63.2 | | 15.6 | 84.5 | 12.0 | | |
| Queue Delay | | 40.8 | | | 0.0 | | 34.7 | 0.2 | 8.2 | | |
| Total Delay | | 65.7 | | | 63.2 | | 50.3 | 84.7 | 20.2 | | |
| LOS | | E | | | E | | D | F | C | | |
| Approach Delay | | 65.7 | | | 63.2 | | | 71.6 | | | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER |
|------------------------|-----|---------|-----|-----|--------|-----|------|--------|------|------|-----|
| Approach LOS | | E | | | E | | | E | | | |
| Stops (vph) | | 1506 | | | 1799 | | 194 | 706 | 26 | | |
| Fuel Used(l) | | 80 | | | 180 | | 10 | 72 | 1 | | |
| CO Emissions (g/hr) | | 1491 | | | 3350 | | 183 | 1347 | 26 | | |
| NOx Emissions (g/hr) | | 288 | | | 647 | | 35 | 260 | 5 | | |
| VOC Emissions (g/hr) | | 344 | | | 773 | | 42 | 311 | 6 | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Queue Length 50th (m) | | 95.7 | | | ~159.6 | | 30.8 | ~182.5 | 5.6 | | |
| Queue Length 95th (m) | | m#146.7 | | | #190.4 | | 52.5 | #257.2 | m9.3 | | |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 13.6 | | 35.4 | |
| Turn Bay Length (m) | | | | | | | | | | | |
| Base Capacity (vph) | | 1988 | | | 2043 | | 779 | 780 | 662 | | |
| Starvation Cap Reductn | | 515 | | | 0 | | 425 | 30 | 556 | | |
| Spillback Cap Reductn | | 0 | | | 0 | | 58 | 0 | 0 | | |
| Storage Cap Reductn | | 0 | | | 0 | | 0 | 0 | 0 | | |
| Reduced v/c Ratio | | 1.33 | | | 1.06 | | 1.03 | 1.15 | 0.63 | | |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 66.1

Intersection LOS: E

Intersection Capacity Utilization 169.4%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

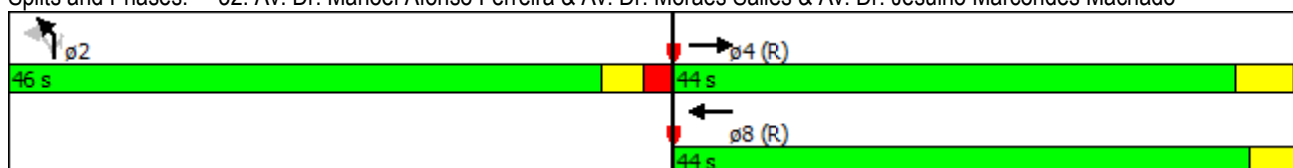
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 |
|----------------------------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | ↕↑ | |
| Volume (vph) | 427 | 249 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 860 | 63 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | 0% | | 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 1.00 |
| Fr _t | | | | | | | | | | 0.850 | |
| Flt Protected | | 0.969 | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Flt Permitted | | 0.969 | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2641 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | | |
| Link Distance (m) | | 18.4 | | | 73.4 | | 37.6 | | 155.6 | | |
| Travel Time (s) | | 1.3 | | | 5.3 | | 2.7 | | 11.2 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 427 | 249 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 860 | 63 |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 676 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 923 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 0.0 | | 1.0 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 | 15 |
| Turn Type | Perm | NA | | | | | | | | Perm | |
| Protected Phases | | 4 | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | 20.0 | |
| Total Split (s) | 36.0 | 36.0 | | | | | | | | 54.0 | |
| Total Split (%) | 40.0% | 40.0% | | | | | | | | 60.0% | |
| Maximum Green (s) | 32.0 | 32.0 | | | | | | | | 50.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 4.0 | | | | | | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | 0 | |
| Act Effct Green (s) | | 32.0 | | | | | | | | 50.0 | |
| Actuated g/C Ratio | | 0.36 | | | | | | | | 0.56 | |
| v/c Ratio | | 0.58 | | | | | | | | 0.63 | |
| Control Delay | | 29.5 | | | | | | | | 16.1 | |
| Queue Delay | | 3.6 | | | | | | | | 0.1 | |
| Total Delay | | 33.1 | | | | | | | | 16.2 | |
| LOS | | C | | | | | | | | B | |
| Approach Delay | | 33.1 | | | | | | | | | |



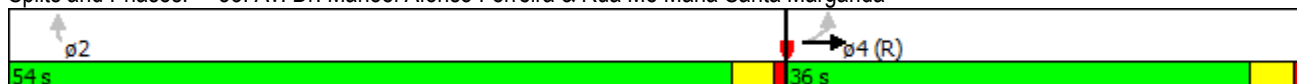
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL | SBR | NWL | NWR | NWR2 | |
|------------------------|-----|-------|-----|-----|------|-----|------|-----|-------|------|------|--|
| Approach LOS | | C | | | | | | | | | | |
| Stops (vph) | | 555 | | | | | | | | 578 | | |
| Fuel Used(l) | | 28 | | | | | | | | 37 | | |
| CO Emissions (g/hr) | | 527 | | | | | | | | 689 | | |
| NOx Emissions (g/hr) | | 102 | | | | | | | | 133 | | |
| VOC Emissions (g/hr) | | 122 | | | | | | | | 159 | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | 0 | | |
| Queue Length 50th (m) | | 58.1 | | | | | | | | 60.9 | | |
| Queue Length 95th (m) | | m73.0 | | | | | | | | 83.0 | | |
| Internal Link Dist (m) | | 0.1 | | | 49.4 | | 13.6 | | 131.6 | | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1170 | | | | | | | | 1467 | | |
| Starvation Cap Reductn | | 0 | | | | | | | | 0 | | |
| Spillback Cap Reductn | | 390 | | | | | | | | 50 | | |
| Storage Cap Reductn | | 0 | | | | | | | | 0 | | |
| Reduced v/c Ratio | | 0.87 | | | | | | | | 0.65 | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 21 (23%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.63 |
| Intersection Signal Delay: | 23.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 60.4% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

21/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 858 | 0 | 1147 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2640 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 208.9 | 59.4 | |
| Travel Time (s) | 4.6 | | | 15.0 | 4.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 858 | 0 | 1147 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 858 | 0 | 1147 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

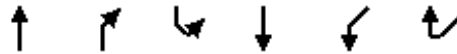
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 41.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

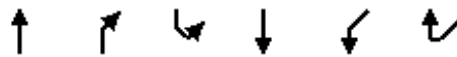
Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|-------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4581 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 62.0 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.5 | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | |
| Heavy Vehicles (%) | 1% | 3% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 1792 | 960 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2752 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 82.0 | | | | | | 8.0 |
| Total Split (%) | 91.1% | | | | | | 9% |
| Maximum Green (s) | 76.0 | | | | | | 3.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 1.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 76.0 | | | | | | |
| Actuated g/C Ratio | 0.84 | | | | | | |
| v/c Ratio | 0.71 | | | | | | |
| Control Delay | 2.8 | | | | | | |
| Queue Delay | 8.5 | | | | | | |
| Total Delay | 11.3 | | | | | | |
| LOS | B | | | | | | |

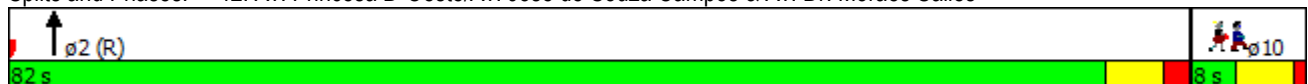


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|-----|------|------|-----|-----|
| Approach Delay | 11.3 | | | | | | |
| Approach LOS | B | | | | | | |
| Stops (vph) | 711 | | | | | | |
| Fuel Used(l) | 38 | | | | | | |
| CO Emissions (g/hr) | 716 | | | | | | |
| NOx Emissions (g/hr) | 138 | | | | | | |
| VOC Emissions (g/hr) | 165 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 41.0 | | | | | | |
| Queue Length 95th (m) | m45.9 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 38.0 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 3868 | | | | | | |
| Starvation Cap Reductn | 1109 | | | | | | |
| Spillback Cap Reductn | 84 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.00 | | | | | | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 24 (27%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.71 |
| Intersection Signal Delay: | 11.3 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 58.9% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |
| m Volume for 95th percentile queue is metered by upstream signal. | |

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.993 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3236 | 1372 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 2% | 2% | 1% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 260 | 123 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 10% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 272 | 111 | 0 | 1792 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 26.0 | 26.0 | 64.0 | 64.0 | | | | |
| Total Split (%) | | | | | 28.9% | 28.9% | 71.1% | 71.1% | | | | |
| Maximum Green (s) | | | | | 21.0 | 21.0 | 58.0 | 58.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 21.0 | 21.0 | | 58.0 | | | | |
| Actuated g/C Ratio | | | | | 0.23 | 0.23 | | 0.64 | | | | |
| v/c Ratio | | | | | 0.36 | 0.35 | | 0.57 | | | | |
| Control Delay | | | | | 30.5 | 32.5 | | 4.8 | | | | |
| Queue Delay | | | | | 0.0 | 1.6 | | 1.1 | | | | |
| Total Delay | | | | | 30.5 | 34.1 | | 5.9 | | | | |
| LOS | | | | | C | C | | A | | | | |
| Approach Delay | | | | | 31.5 | | | 5.9 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019

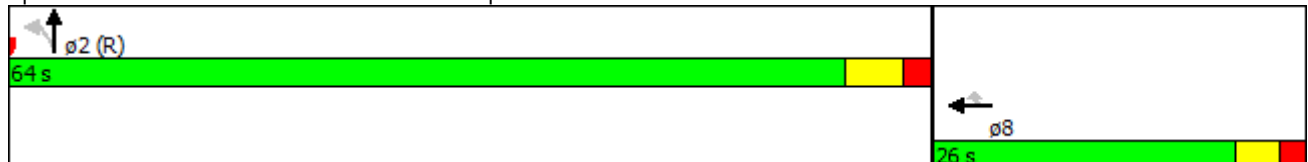


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|------|-----|------|-----|-----|------|-----|
| Approach LOS | | | | | C | | | A | | | | |
| Stops (vph) | | | | | 211 | 89 | | 552 | | | | |
| Fuel Used(l) | | | | | 13 | 5 | | 29 | | | | |
| CO Emissions (g/hr) | | | | | 234 | 100 | | 542 | | | | |
| NOx Emissions (g/hr) | | | | | 45 | 19 | | 105 | | | | |
| VOC Emissions (g/hr) | | | | | 54 | 23 | | 125 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 22.8 | 18.5 | | 21.9 | | | | |
| Queue Length 95th (m) | | | | | 35.1 | 35.8 | | 26.4 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 755 | 320 | | 3135 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 1009 | | | | |
| Spillback Cap Reductn | | | | | 0 | 100 | | 935 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.36 | 0.50 | | 0.84 | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 26 (29%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.57 |
| Intersection Signal Delay: | 10.5 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 58.9% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

21/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 179 | 386 | 692 | 1375 | 725 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.948 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1542 | 3239 | 1658 | 4456 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1542 | 3239 | 1658 | 4456 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 213.6 | |
| Travel Time (s) | | 2.4 | | 15.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 3% | 3% | 0% | 1% | 2% |
| Adj. Flow (vph) | 179 | 386 | 692 | 1375 | 725 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 161 | 404 | 692 | 2100 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 24.0 | 24.0 | 66.0 | 66.0 | |
| Total Split (%) | 26.7% | 26.7% | 73.3% | 73.3% | |
| Maximum Green (s) | 20.0 | 20.0 | 62.0 | 62.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 20.0 | 20.0 | 62.0 | 62.0 | |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.69 | 0.69 | |
| v/c Ratio | 0.47 | 0.56 | 0.61 | 0.68 | |
| Control Delay | 35.7 | 34.6 | 10.3 | 9.7 | |
| Queue Delay | 0.9 | 0.3 | 0.0 | 0.4 | |

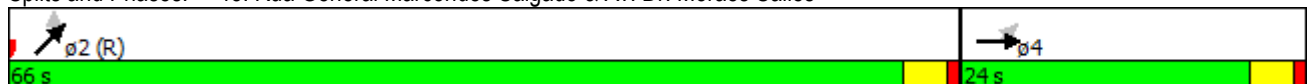


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|------|------|-------|-----|
| Total Delay | 36.6 | 34.9 | 10.3 | 10.1 | |
| LOS | D | C | B | B | |
| Approach Delay | | 35.4 | | 10.2 | |
| Approach LOS | | D | | B | |
| Stops (vph) | 132 | 335 | 337 | 1090 | |
| Fuel Used(l) | 8 | 19 | 26 | 80 | |
| CO Emissions (g/hr) | 143 | 355 | 489 | 1495 | |
| NOx Emissions (g/hr) | 28 | 68 | 94 | 289 | |
| VOC Emissions (g/hr) | 33 | 82 | 113 | 345 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 28.1 | 36.0 | 58.2 | 71.2 | |
| Queue Length 95th (m) | 49.7 | 52.0 | 89.5 | 86.5 | |
| Internal Link Dist (m) | | 9.3 | | 189.6 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 342 | 719 | 1142 | 3069 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 50 | 52 | 0 | 443 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.55 | 0.61 | 0.61 | 0.80 | |

Intersection Summary

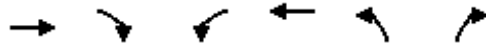
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 87 (97%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.68 |
| Intersection Signal Delay: | 14.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 58.0% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 21/11/2019



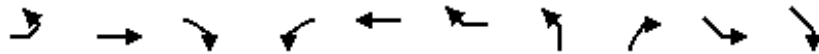
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.996 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4853 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 3% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1078 | 33 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1111 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 24.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Colombo



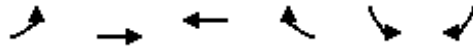
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↗ | ↖ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1415 | 3385 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 7% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2 | 27 | 692 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

21/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↓ | |
| Volume (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1711 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 563 | 0 | 0 | 2 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.7% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 23/10/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr't | | 0.850 | | | 0.978 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3456 | 0 | 0 | 4647 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1078 | 0 | 0 | 1233 | 214 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1078 | 0 | 0 | 1447 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 45.0 | | | 45.0 | | | |
| Total Split (%) | | 50.0% | | | 50.0% | | | |
| Maximum Green (s) | | 41.0 | | | 41.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 41.0 | | | 41.0 | | | |
| Actuated g/C Ratio | | 0.46 | | | 0.46 | | | |
| v/c Ratio | | 0.68 | | | 0.68 | | | |
| Control Delay | | 18.1 | | | 11.3 | | | |
| Queue Delay | | 0.0 | | | 0.6 | | | |
| Total Delay | | 18.1 | | | 12.0 | | | |
| LOS | | B | | | B | | | |
| Approach Delay | | | | | 12.0 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 21/11/2019

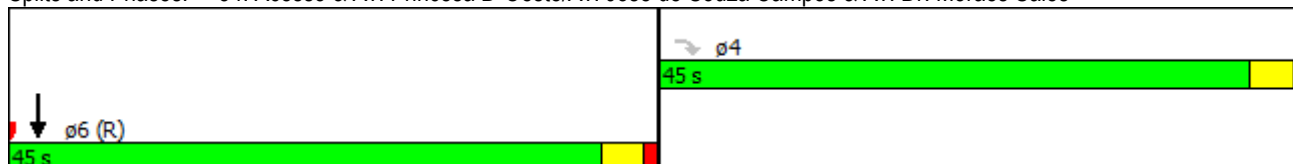


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|------|-----|------|------|-----|------|-----|
| Approach LOS | | | | | B | | | |
| Stops (vph) | | 753 | | | 371 | | | |
| Fuel Used(l) | | 35 | | | 28 | | | |
| CO Emissions (g/hr) | | 657 | | | 524 | | | |
| NOx Emissions (g/hr) | | 127 | | | 101 | | | |
| VOC Emissions (g/hr) | | 151 | | | 121 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 57.4 | | | 28.0 | | | |
| Queue Length 95th (m) | | 76.5 | | | 32.0 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1574 | | | 2116 | | | |
| Starvation Cap Reductn | | 0 | | | 306 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.68 | | | 0.80 | | | |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 40 (44%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 40 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.68 |
| Intersection Signal Delay: | 14.6 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 58.3% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



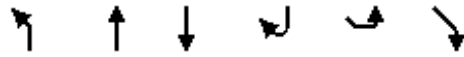
Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

21/11/2019

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↗ | |
| Volume (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 33 | 214 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 21.4% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

21/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 0% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.998 | | | | |
| Satd. Flow (prot) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.998 | | | | |
| Satd. Flow (perm) | 0 | 4663 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 128.3 | 27.3 | | 32.7 | |
| Travel Time (s) | | 9.2 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 34 | 1081 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1115 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

21/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|----------|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 136.8 | | | 22.0 |
| Travel Time (s) | 2.4 | | 9.8 | | | 1.6 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 34 | 0 | 0 | 0 | 0 | 866 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.4% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↗↗↗ | | |
| Volume (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Adj. Flow (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 602 | 0 | 0 | 923 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 23.0 | | |
| Total Split (s) | 47.0 | | | 43.0 | | |
| Total Split (%) | 52.2% | | | 47.8% | | |
| Maximum Green (s) | 40.0 | | | 38.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 40.0 | | | 38.0 | | |
| Actuated g/C Ratio | 0.44 | | | 0.42 | | |
| v/c Ratio | 0.41 | | | 0.44 | | |
| Control Delay | 0.7 | | | 4.0 | | |
| Queue Delay | 0.4 | | | 0.2 | | |
| Total Delay | 1.1 | | | 4.2 | | |
| LOS | A | | | A | | |
| Approach Delay | 1.1 | | | 4.2 | | |
| Approach LOS | A | | | A | | |
| Stops (vph) | 0 | | | 132 | | |

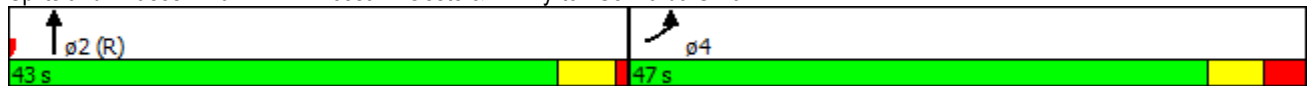


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | 2 | | | 11 | | |
| CO Emissions (g/hr) | 43 | | | 212 | | |
| NOx Emissions (g/hr) | 8 | | | 41 | | |
| VOC Emissions (g/hr) | 10 | | | 49 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 0.1 | | | 6.3 | | |
| Queue Length 95th (m) | 0.0 | | | 7.6 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1475 | | | 2075 | | |
| Starvation Cap Reductn | 398 | | | 397 | | |
| Spillback Cap Reductn | 361 | | | 333 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 0.56 | | | 0.55 | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 4 (4%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.44 |
| Intersection Signal Delay: | 3.0 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 97.1% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

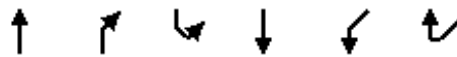
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



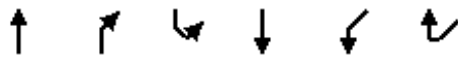
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4916 | 3319 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1364 | 457 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 56.0 | 34.0 | |
| Total Split (%) | | | | 62.2% | 37.8% | |
| Maximum Green (s) | | | | 51.0 | 30.0 | |
| Yellow Time (s) | | | | 4.0 | 3.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 4.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 51.0 | 30.0 | |
| Actuated g/C Ratio | | | | 0.57 | 0.33 | |
| v/c Ratio | | | | 0.49 | 0.41 | |
| Control Delay | | | | 2.6 | 5.2 | |
| Queue Delay | | | | 0.1 | 0.3 | |
| Total Delay | | | | 2.6 | 5.5 | |
| LOS | | | | A | A | |
| Approach Delay | | | | 2.6 | 5.5 | |
| Approach LOS | | | | A | A | |
| Stops (vph) | | | | 251 | 230 | |

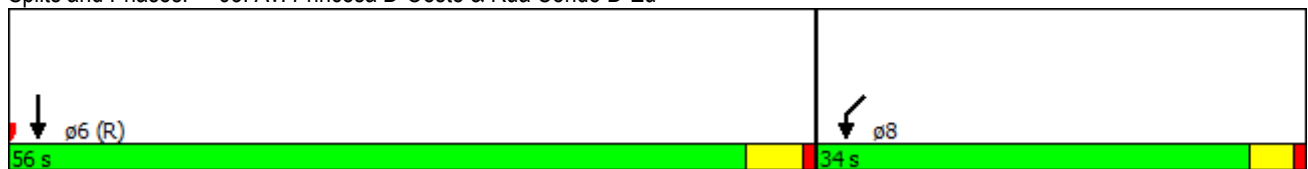


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | | | | 13 | 8 | |
| CO Emissions (g/hr) | | | | 245 | 153 | |
| NOx Emissions (g/hr) | | | | 47 | 29 | |
| VOC Emissions (g/hr) | | | | 56 | 35 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 4.9 | 20.4 | |
| Queue Length 95th (m) | | | | 5.7 | 23.2 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 2785 | 1106 | |
| Starvation Cap Reductn | | | | 235 | 0 | |
| Spillback Cap Reductn | | | | 32 | 224 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 0.53 | 0.52 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 5 (6%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.49 |
| Intersection Signal Delay: | 3.3 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 45.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

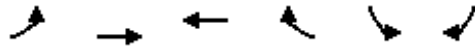
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & R. Antônio A. de Camargo

21/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↑ |
| Volume (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 3% | 3% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Fr _t | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3397 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 372 | 4 | 0 | 11 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 376 | 0 | 0 | 11 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 20.0% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

21/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Fr _t | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3454 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1554 | 0 | 0 | 0 | 0 | 1915 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 41.0 | | | | | 49.0 |
| Total Split (%) | 45.6% | | | | | 54.4% |
| Maximum Green (s) | 37.0 | | | | | 43.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 37.0 | | | | | 43.0 |
| Actuated g/C Ratio | 0.41 | | | | | 0.48 |
| v/c Ratio | 1.09 | | | | | 1.16 |
| Control Delay | 63.6 | | | | | 97.0 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 63.6 | | | | | 97.0 |
| LOS | E | | | | | F |
| Approach Delay | 63.6 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|--------|-----|-----|------|------|--------|
| Approach LOS | E | | | | | |
| Stops (vph) | 1273 | | | | | 1538 |
| Fuel Used(l) | 107 | | | | | 179 |
| CO Emissions (g/hr) | 1996 | | | | | 3321 |
| NOx Emissions (g/hr) | 385 | | | | | 641 |
| VOC Emissions (g/hr) | 460 | | | | | 766 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | ~171.3 | | | | | ~182.9 |
| Queue Length 95th (m) | #209.7 | | | | | #220.2 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1420 | | | | | 1650 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.09 | | | | | 1.16 |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 2 (2%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 82.0
 Intersection LOS: F
 Intersection Capacity Utilization 92.4%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Mendes Machado

21/10/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1882 | 370 | 0 | 2230 | 0 | 73 | 658 | 127 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.997 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3080 | 1351 | 0 | 4677 | 0 | 0 | 3275 | 1500 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3080 | 1351 | 0 | 4677 | 0 | 0 | 3275 | 1500 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 92.3 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 6.6 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| Heavy Vehicles (%) | 2% | 5% | 2% | 2% | 4% | 2% | 4% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1882 | 370 | 0 | 2230 | 0 | 73 | 658 | 127 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1919 | 333 | 0 | 2230 | 0 | 0 | 731 | 127 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 63.0 | 63.0 | | 63.0 | | 27.0 | 27.0 | 27.0 | | |
| Total Split (%) | | 70.0% | 70.0% | | 70.0% | | 30.0% | 30.0% | 30.0% | | |
| Maximum Green (s) | | 59.0 | 59.0 | | 58.0 | | 22.0 | 22.0 | 22.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 59.0 | 59.0 | | 58.0 | | 22.0 | 22.0 | 22.0 | | |
| Actuated g/C Ratio | | 0.66 | 0.66 | | 0.64 | | 0.24 | 0.24 | 0.24 | | |
| v/c Ratio | | 0.95 | 0.38 | | 0.74 | | 0.91 | 0.35 | | | |
| Control Delay | | 26.7 | 8.6 | | 4.3 | | 50.8 | 31.3 | | | |
| Queue Delay | | 44.4 | 0.0 | | 5.0 | | 0.0 | 0.0 | | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

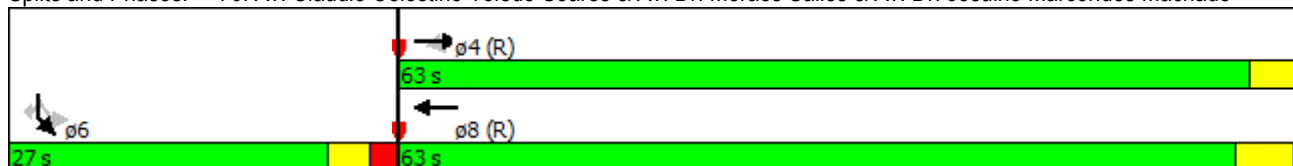


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|------|-----|-------|-----|------|--------|------|------|-----|
| Total Delay | | 71.1 | 8.6 | | 9.3 | | | 50.8 | 31.3 | | |
| LOS | | E | A | | A | | | D | C | | |
| Approach Delay | | 61.8 | | | 9.3 | | | 47.9 | | | |
| Approach LOS | | E | | | A | | | D | | | |
| Stops (vph) | | 1459 | 138 | | 356 | | | 625 | 99 | | |
| Fuel Used(l) | | 87 | 8 | | 27 | | | 46 | 6 | | |
| CO Emissions (g/hr) | | 1611 | 149 | | 502 | | | 850 | 110 | | |
| NOx Emissions (g/hr) | | 311 | 29 | | 97 | | | 164 | 21 | | |
| VOC Emissions (g/hr) | | 372 | 34 | | 116 | | | 196 | 25 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | 155.4 | 27.0 | | 24.7 | | | 66.8 | 19.1 | | |
| Queue Length 95th (m) | | #237.1 | 44.1 | | m22.5 | | | #100.6 | 35.5 | | |
| Internal Link Dist (m) | | 68.3 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 2019 | 885 | | 3014 | | | 800 | 366 | | |
| Starvation Cap Reductn | | 0 | 0 | | 716 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 544 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.30 | 0.38 | | 0.97 | | | 0.91 | 0.35 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 37.6
 Intersection LOS: D
 Intersection Capacity Utilization 169.4%
 ICU Level of Service H
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↗↗ | ↕↗ | | | |
| Volume (vph) | 0 | 563 | 602 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.932 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 0 | 647 | 692 | 580 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 647 | 1272 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 59.2% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 204 | 471 | 34 | 198 | 426 | 16 | 14 | 44 | 24 | 15 | 73 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.956 | | | 0.929 | |
| Flt Protected | | 0.986 | | | 0.985 | | | 0.992 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 3118 | 0 | 0 | 3069 | 0 |
| Flt Permitted | | 0.986 | | | 0.985 | | | 0.871 | | | 0.918 | |
| Satd. Flow (perm) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 2738 | 0 | 0 | 2829 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 101.8 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 234 | 541 | 39 | 228 | 490 | 18 | 16 | 51 | 28 | 17 | 84 | 91 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 814 | 0 | 0 | 736 | 0 | 0 | 95 | 0 | 0 | 192 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 24.0 | 24.0 | | 26.0 | 26.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 38.1% | 38.1% | | 41.3% | 41.3% | | 20.6% | 20.6% | | 20.6% | 20.6% | |
| Maximum Green (s) | 18.0 | 18.0 | | 20.0 | 20.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 18.0 | | | 20.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.32 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 0.88 | | | 0.72 | | | 0.27 | | | 0.53 | |
| Control Delay | | 34.5 | | | 23.9 | | | 27.2 | | | 31.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 34.5 | | | 23.9 | | | 27.2 | | | 31.8 | |
| LOS | | C | | | C | | | C | | | C | |
| Approach Delay | | 34.5 | | | 23.9 | | | 27.2 | | | 31.8 | |
| Approach LOS | | C | | | C | | | C | | | C | |

Lanes, Volumes, Timings
 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

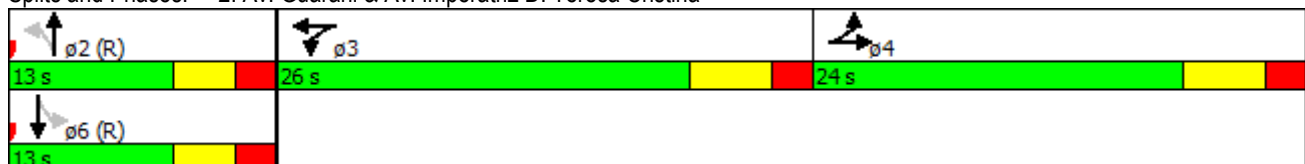
18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Stops (vph) | | 612 | | | 543 | | | 72 | | | 152 | |
| Fuel Used(l) | | 45 | | | 46 | | | 4 | | | 9 | |
| CO Emissions (g/hr) | | 835 | | | 863 | | | 75 | | | 169 | |
| NOx Emissions (g/hr) | | 161 | | | 167 | | | 14 | | | 33 | |
| VOC Emissions (g/hr) | | 193 | | | 199 | | | 17 | | | 39 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 49.5 | | | 41.3 | | | 5.6 | | | 11.8 | |
| Queue Length 95th (m) | | #76.4 | | | 57.1 | | | 11.5 | | | 20.4 | |
| Internal Link Dist (m) | | 77.9 | | | 63.4 | | | 62.2 | | | 77.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 927 | | | 1017 | | | 347 | | | 359 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.88 | | | 0.72 | | | 0.27 | | | 0.53 | |

Intersection Summary
 Area Type: Other
 Cycle Length: 63
 Actuated Cycle Length: 63
 Offset: 24 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 29.6
 Intersection LOS: C
 Intersection Capacity Utilization 64.5%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1875 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.991 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2155 | 141 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2296 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.3% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 423 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 1269 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Fr't | | 0.988 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 486 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 701 | 1459 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 530 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2160 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | 84.0 | 84.0 | |
| Total Split (%) | | 21.5% | | | | | | | | 78.5% | 78.5% | |
| Maximum Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 79.0 | |
| Actuated g/C Ratio | | 0.15 | | | | | | | | | 0.74 | |
| v/c Ratio | | 1.07 | | | | | | | | | 0.64 | |
| Control Delay | | 104.6 | | | | | | | | | 8.0 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.8 | |
| Total Delay | | 104.6 | | | | | | | | | 55.8 | |
| LOS | | F | | | | | | | | | E | |
| Approach Delay | | 104.6 | | | | | | | | | 55.8 | |
| Approach LOS | | F | | | | | | | | | E | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|
| Stops (vph) | | 397 | | | | | | | | | 848 | |
| Fuel Used(l) | | 49 | | | | | | | | | 39 | |
| CO Emissions (g/hr) | | 904 | | | | | | | | | 718 | |
| NOx Emissions (g/hr) | | 175 | | | | | | | | | 139 | |
| VOC Emissions (g/hr) | | 209 | | | | | | | | | 166 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | 0 | |
| Queue Length 50th (m) | | ~68.0 | | | | | | | | | 73.0 | |
| Queue Length 95th (m) | | #97.6 | | | | | | | | | 80.2 | |
| Internal Link Dist (m) | | 35.9 | | | 7.7 | | | 0.1 | | | 21.2 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 495 | | | | | | | | | 3392 | |
| Starvation Cap Reductn | | 0 | | | | | | | | | 1610 | |
| Spillback Cap Reductn | | 0 | | | | | | | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | | | | 0 | |
| Reduced v/c Ratio | | 1.07 | | | | | | | | | 1.21 | |

Intersection Summary

| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 107 |
| Actuated Cycle Length: | 107 |
| Offset: | 58 (54%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.07 |
| Intersection Signal Delay: | 65.4 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 59.8% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1879 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.953 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2160 | 980 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3140 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | | 77.0 | |
| Total Split (%) | | 23.0% | | | | | | | | | 77.0% | |
| Maximum Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Actuated g/C Ratio | | 0.16 | | | | | | | | | 0.72 | |
| v/c Ratio | | 0.88 | | | | | | | | | 0.92 | |
| Control Delay | | 60.1 | | | | | | | | | 18.0 | |
| Queue Delay | | 0.0 | | | | | | | | | 45.4 | |
| Total Delay | | 60.1 | | | | | | | | | 63.4 | |
| LOS | | E | | | | | | | | | E | |
| Approach Delay | | 60.1 | | | | | | | | | 63.4 | |
| Approach LOS | | E | | | | | | | | | E | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|-----|-------|
| Stops (vph) | | 368 | | | | | | | | | | 2060 |
| Fuel Used(l) | | 30 | | | | | | | | | | 102 |
| CO Emissions (g/hr) | | 553 | | | | | | | | | | 1892 |
| NOx Emissions (g/hr) | | 107 | | | | | | | | | | 365 |
| VOC Emissions (g/hr) | | 128 | | | | | | | | | | 436 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 49.4 | | | | | | | | | | 168.5 |
| Queue Length 95th (m) | | #73.1 | | | | | | | | | | 180.8 |
| Internal Link Dist (m) | | 47.4 | | | 12.6 | | | 21.2 | | | | 44.4 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 531 | | | | | | | | | | 3396 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 868 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.88 | | | | | | | | | | 1.24 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 58 (58%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 90 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.92 |
| Intersection Signal Delay: | 62.9 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 76.6% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 1868 | 7 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1542 | 4960 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1542 | 4960 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 348 | 2147 | 8 | 436 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 348 | 2155 | 0 | 436 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 65.0 | | 37.0 |
| Total Split (%) | | 63.7% | | 36.3% |
| Maximum Green (s) | | 60.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 102.0 | 60.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.59 | | 0.31 |
| v/c Ratio | 0.23 | 0.74 | | 0.41 |
| Control Delay | 0.3 | 17.3 | | 29.0 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.3 | 17.3 | | 29.0 |
| LOS | A | B | | C |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| Approach Delay | | 17.3 | | 29.0 |
| Approach LOS | | B | | C |
| Stops (vph) | 0 | 1295 | | 289 |
| Fuel Used(l) | 1 | 78 | | 16 |
| CO Emissions (g/hr) | 21 | 1443 | | 299 |
| NOx Emissions (g/hr) | 4 | 279 | | 58 |
| VOC Emissions (g/hr) | 5 | 333 | | 69 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 111.6 | | 37.4 |
| Queue Length 95th (m) | 0.0 | 122.7 | | 49.8 |
| Internal Link Dist (m) | | 108.8 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1542 | 2917 | | 1062 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.23 | 0.74 | | 0.41 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 102 |
| Actuated Cycle Length: | 102 |
| Offset: | 58 (57%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.74 |
| Intersection Signal Delay: | 17.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 55.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

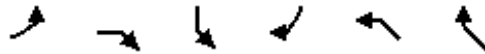
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↗↘ | | | | | ↖↗↘↙ | |
| Volume (vph) | 1644 | 0 | 0 | 0 | 0 | 1884 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | 0.850 | |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 1890 | 0 | 0 | 0 | 0 | 2166 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 1890 | 0 | 0 | 0 | 0 | 2166 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | Prot | | | | | Prot | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | 2 | |
| Minimum Split (s) | 22.0 | | | | | 22.0 | 22.0 |
| Total Split (s) | 65.0 | | | | | 43.0 | 65.0 |
| Total Split (%) | 60.2% | | | | | 39.8% | 60% |
| Maximum Green (s) | 59.0 | | | | | 37.0 | 59.0 |
| Yellow Time (s) | 4.0 | | | | | 4.0 | 4.0 |
| All-Red Time (s) | 2.0 | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 | |
| Total Lost Time (s) | 6.0 | | | | | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 | 0 |
| Act Effct Green (s) | 59.0 | | | | | 37.0 | |
| Actuated g/C Ratio | 0.55 | | | | | 0.34 | |
| v/c Ratio | 1.03 | | | | | 1.83 | |
| Control Delay | 55.2 | | | | | 402.7 | |
| Queue Delay | 0.0 | | | | | 0.0 | |
| Total Delay | 55.2 | | | | | 402.7 | |
| LOS | E | | | | | F | |
| Approach Delay | 55.2 | | | | | | |
| Approach LOS | E | | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019

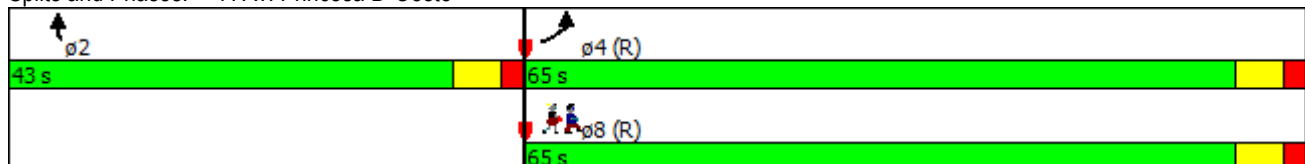


| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|------------------------|--------|-----|------|-----|-------|--------|----|
| Stops (vph) | 1413 | | | | | 1290 | |
| Fuel Used(l) | 105 | | | | | 693 | |
| CO Emissions (g/hr) | 1958 | | | | | 12888 | |
| NOx Emissions (g/hr) | 378 | | | | | 2488 | |
| VOC Emissions (g/hr) | 451 | | | | | 2973 | |
| Dilemma Vehicles (#) | 0 | | | | | 0 | |
| Queue Length 50th (m) | ~232.3 | | | | | ~319.3 | |
| Queue Length 95th (m) | #259.5 | | | | | #340.2 | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 1830 | | | | | 1183 | |
| Starvation Cap Reductn | 0 | | | | | 0 | |
| Spillback Cap Reductn | 0 | | | | | 0 | |
| Storage Cap Reductn | 0 | | | | | 0 | |
| Reduced v/c Ratio | 1.03 | | | | | 1.83 | |

Intersection Summary

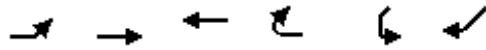
Area Type: Other
 Cycle Length: 108
 Actuated Cycle Length: 108
 Offset: 0 (0%), Referenced to phase 4:EBL and 8:Ped, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.83
 Intersection Signal Delay: 240.8
 Intersection LOS: F
 Intersection Capacity Utilization 100.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 405 | 461 | 0 | 0 | 0 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 466 | 530 | 0 | 0 | 0 | 980 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 466 | 530 | 0 | 0 | 0 | 980 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 33.2% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 159 | 241 | 15 | 112 | 304 | 38 | 11 | 166 | 163 | 15 | 284 | 362 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | 0.989 | | | 0.935 | | | 0.926 | |
| Flt Protected | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Flt Permitted | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 125.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 9.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 183 | 277 | 17 | 129 | 349 | 44 | 13 | 191 | 187 | 17 | 326 | 416 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 477 | 0 | 0 | 522 | 0 | 0 | 391 | 0 | 0 | 759 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 86.6% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

18/11/2019



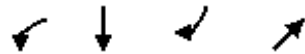
| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 319 | 769 | 452 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.865 | 0.944 | |
| Flt Protected | | | | | 0.969 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1816 | 3247 | 0 |
| Flt Permitted | | | | | 0.969 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1816 | 3247 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Confl. Peds. (#/hr) | | | | | 452 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 367 | 884 | 520 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 367 | 1404 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 323 | 2802 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Fr _t | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4846 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4846 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 371 | 3221 | 79 | 1311 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 371 | 3300 | 0 | 1311 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 55.0 | 50.0 | | 49.0 |
| Total Split (%) | 52.4% | 47.6% | | 46.7% |
| Maximum Green (s) | 51.0 | 44.0 | | 44.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 51.0 | 44.0 | | 50.0 |
| Actuated g/C Ratio | 0.49 | 0.42 | | 0.48 |
| v/c Ratio | 0.23 | 1.63 | | 0.58 |
| Control Delay | 16.1 | 309.5 | | 21.3 |
| Queue Delay | 61.5 | 0.0 | | 50.2 |
| Total Delay | 77.6 | 309.5 | | 71.5 |
| LOS | E | F | | E |
| Approach Delay | | 309.5 | | 71.5 |
| Approach LOS | | F | | E |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

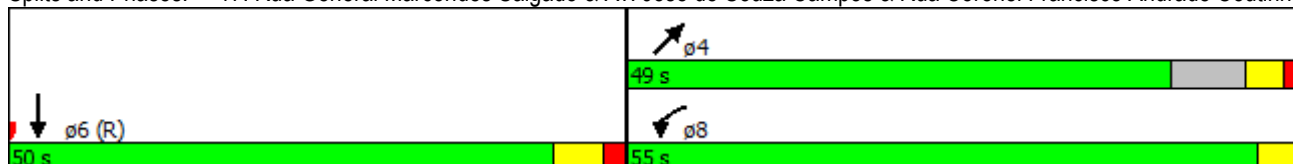


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|--------|------|------|
| Stops (vph) | 178 | 2040 | | 793 |
| Fuel Used(l) | 9 | 785 | | 43 |
| CO Emissions (g/hr) | 167 | 14608 | | 805 |
| NOx Emissions (g/hr) | 32 | 2820 | | 155 |
| VOC Emissions (g/hr) | 39 | 3369 | | 186 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 22.9 | ~375.8 | | 72.4 |
| Queue Length 95th (m) | 31.1 | #384.3 | | 83.0 |
| Internal Link Dist (m) | | 180.5 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1627 | 2030 | | 2245 |
| Starvation Cap Reductn | 1365 | 0 | | 1287 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.42 | 1.63 | | 1.37 |

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.63
 Intersection Signal Delay: 229.6
 Intersection LOS: F
 Intersection Capacity Utilization 99.4%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

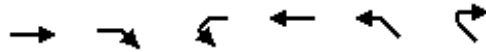
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



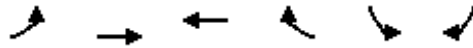
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 646 | 442 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.939 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3213 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3213 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 743 | 508 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1251 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.88 | 0.88 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 35.4% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 85 | 348 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 85 | 348 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 386 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 444 | 85 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 444 | 85 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 36.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↔ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 105 | 928 | 0 | 0 | 0 | 0 | 0 | 799 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frts | | | | | | | | 0.973 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 121 | 1067 | 0 | 0 | 0 | 0 | 0 | 918 | 206 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1188 | 0 | 0 | 0 | 0 | 0 | 1124 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 23.0 | 23.0 | | | | | | 30.0 | | | | |
| Total Split (%) | 43.4% | 43.4% | | | | | | 56.6% | | | | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 25.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 25.0 | | | | |
| Actuated g/C Ratio | | 0.30 | | | | | | 0.47 | | | | |
| v/c Ratio | | 1.16 | | | | | | 0.52 | | | | |
| Control Delay | | 103.6 | | | | | | 10.9 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 103.6 | | | | | | 10.9 | | | | |
| LOS | | F | | | | | | B | | | | |
| Approach Delay | | 103.6 | | | | | | 10.9 | | | | |
| Approach LOS | | F | | | | | | B | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

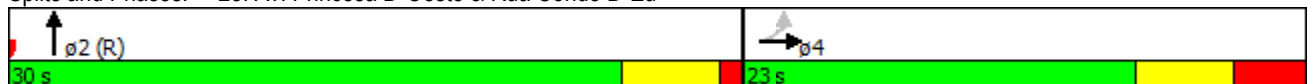


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Stops (vph) | | 855 | | | | | | 626 | | | | |
| Fuel Used(l) | | 105 | | | | | | 25 | | | | |
| CO Emissions (g/hr) | | 1947 | | | | | | 460 | | | | |
| NOx Emissions (g/hr) | | 376 | | | | | | 89 | | | | |
| VOC Emissions (g/hr) | | 449 | | | | | | 106 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | ~77.3 | | | | | | 26.6 | | | | |
| Queue Length 95th (m) | | #106.2 | | | | | | 35.1 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1027 | | | | | | 2168 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 1.16 | | | | | | 0.52 | | | | |

Intersection Summary

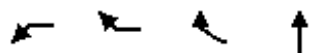
| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 53 |
| Actuated Cycle Length: | 53 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.16 |
| Intersection Signal Delay: | 58.5 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 58.1% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

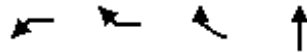


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 561 | 379 | 225 | 1309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.956 | 0.850 | | |
| Flt Protected | 0.966 | | | |
| Satd. Flow (prot) | 3239 | 1371 | 0 | 4964 |
| Flt Permitted | 0.966 | | | |
| Satd. Flow (perm) | 3239 | 1371 | 0 | 4964 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 645 | 436 | 259 | 1505 |
| Shared Lane Traffic (%) | | 62% | | |
| Lane Group Flow (vph) | 915 | 425 | 0 | 1505 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 30.0 | 30.0 | | 73.0 |
| Total Split (%) | 29.1% | 29.1% | | 70.9% |
| Maximum Green (s) | 25.0 | 25.0 | | 68.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 25.0 | 25.0 | | 68.0 |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.66 |
| v/c Ratio | 1.16 | 1.28 | | 0.46 |
| Control Delay | 123.8 | 181.6 | | 9.1 |
| Queue Delay | 0.0 | 0.0 | | 33.9 |
| Total Delay | 123.8 | 181.6 | | 42.9 |
| LOS | F | F | | D |
| Approach Delay | 142.1 | | | 42.9 |
| Approach LOS | F | | | D |

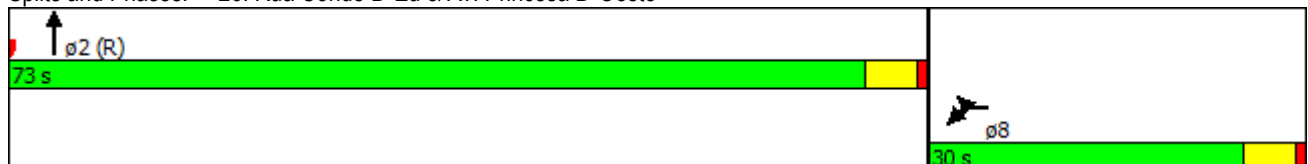


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|--------|--------|------|------|
| Stops (vph) | 668 | 289 | | 593 |
| Fuel Used(l) | 99 | 62 | | 31 |
| CO Emissions (g/hr) | 1841 | 1153 | | 576 |
| NOx Emissions (g/hr) | 355 | 222 | | 111 |
| VOC Emissions (g/hr) | 425 | 266 | | 133 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | ~118.4 | ~125.1 | | 51.0 |
| Queue Length 95th (m) | #149.5 | #182.6 | | 57.7 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 786 | 332 | | 3277 |
| Starvation Cap Reductn | 0 | 0 | | 1862 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.16 | 1.28 | | 1.06 |

Intersection Summary

Area Type: Other
 Cycle Length: 103
 Actuated Cycle Length: 103
 Offset: 2 (2%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 1.28
 Intersection Signal Delay: 89.6
 Intersection LOS: F
 Intersection Capacity Utilization 59.3%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↶↷ | ↶↷↶↷ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1644 | 1998 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1890 | 2297 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1890 | 2297 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 98.0 | 98.0 | 8.0 |
| Total Split (%) | | | | | 92.5% | 92.5% | 8% |
| Maximum Green (s) | | | | | 92.0 | 92.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 92.0 | 92.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.66 | 0.54 | |
| Control Delay | | | | | 3.5 | 2.3 | |
| Queue Delay | | | | | 7.8 | 2.8 | |
| Total Delay | | | | | 11.3 | 5.0 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|-----|
| LOS | | | | | B | A | |
| Approach Delay | | | | | | 7.9 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 425 | 403 | |
| Fuel Used(l) | | | | | 27 | 28 | |
| CO Emissions (g/hr) | | | | | 499 | 524 | |
| NOx Emissions (g/hr) | | | | | 96 | 101 | |
| VOC Emissions (g/hr) | | | | | 115 | 121 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 41.0 | 28.4 | |
| Queue Length 95th (m) | | | | | 47.4 | 30.9 | |
| Internal Link Dist (m) | 0.1 | | 259.4 | | | 58.2 | |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2850 | 4222 | |
| Starvation Cap Reductn | | | | | 930 | 1767 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.98 | 0.94 | |

Intersection Summary

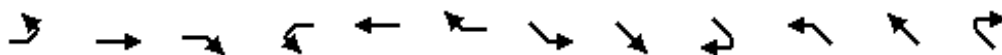
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 5 (5%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.66 |
| Intersection Signal Delay: | 7.9 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 58.8% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

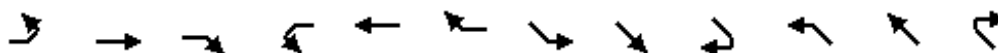
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 1777 | 0 | 0 | 1612 | 214 | 0 | 0 | 0 | 144 | 418 | 102 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.982 | | | | | | 0.996 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1721 | 1483 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1721 | 1483 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | 41.9 | | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | 3.0 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 1% | 0% |
| Adj. Flow (vph) | 0 | 2043 | 0 | 0 | 1853 | 246 | 0 | 0 | 0 | 166 | 480 | 117 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 10% |
| Lane Group Flow (vph) | 0 | 2043 | 0 | 0 | 2099 | 0 | 0 | 0 | 0 | 166 | 492 | 105 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | 3.3 | | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | | 81.0 | | | 76.0 | | | | | 45.0 | 45.0 | 45.0 |
| Total Split (%) | | 64.3% | | | 60.3% | | | | | 35.7% | 35.7% | 35.7% |
| Maximum Green (s) | | 76.0 | | | 72.0 | | | | | 40.0 | 40.0 | 40.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 76.0 | | | 77.0 | | | | | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | | 0.60 | | | 0.61 | | | | | 0.32 | 0.32 | 0.32 |
| v/c Ratio | | 0.72 | | | 0.74 | | | | | 0.30 | 0.90 | 0.22 |
| Control Delay | | 4.9 | | | 19.6 | | | | | 34.3 | 62.3 | 33.2 |
| Queue Delay | | 27.8 | | | 0.0 | | | | | 75.9 | 56.9 | 80.3 |
| Total Delay | | 32.8 | | | 19.6 | | | | | 110.2 | 119.2 | 113.5 |
| LOS | | C | | | B | | | | | F | F | F |
| Approach Delay | | 32.8 | | | 19.6 | | | | | | 116.4 | |
| Approach LOS | | C | | | B | | | | | | F | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

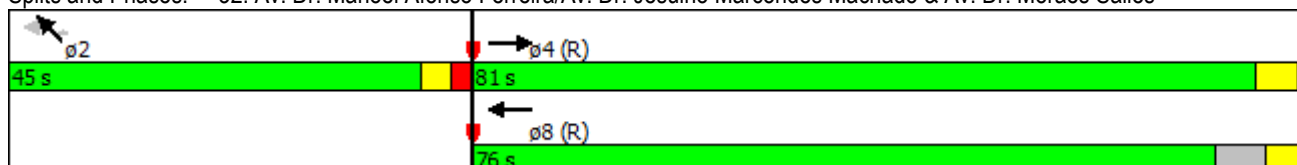


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|-------|-----|-----|------|-----|------|--------|------|
| Stops (vph) | | 467 | | | 1247 | | | | | 107 | 381 | 66 |
| Fuel Used(l) | | 27 | | | 90 | | | | | 7 | 31 | 4 |
| CO Emissions (g/hr) | | 504 | | | 1669 | | | | | 126 | 572 | 78 |
| NOx Emissions (g/hr) | | 97 | | | 322 | | | | | 24 | 110 | 15 |
| VOC Emissions (g/hr) | | 116 | | | 385 | | | | | 29 | 132 | 18 |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Queue Length 50th (m) | | 28.0 | | | 135.0 | | | | | 32.6 | 128.9 | 21.1 |
| Queue Length 95th (m) | | m28.0 | | | 144.3 | | | | | 50.2 | #185.4 | 35.8 |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 35.4 | | | 17.9 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2848 | | | 2819 | | | | | 553 | 546 | 470 |
| Starvation Cap Reductn | | 907 | | | 0 | | | | | 441 | 334 | 377 |
| Spillback Cap Reductn | | 0 | | | 41 | | | | | 0 | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Reduced v/c Ratio | | 1.05 | | | 0.76 | | | | | 1.48 | 2.32 | 1.13 |

Intersection Summary

Area Type: Other
 Cycle Length: 126
 Actuated Cycle Length: 126
 Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 40.2 Intersection LOS: D
 Intersection Capacity Utilization 143.6% ICU Level of Service H
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

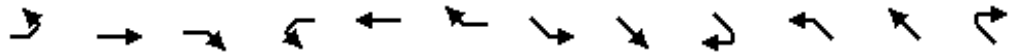
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

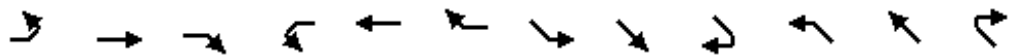


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | | ↕↕ | |
| Volume (vph) | 351 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.978 | |
| Flt Protected | | 0.968 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3345 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Flt Permitted | | 0.968 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3345 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 403 | 199 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 364 | 61 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 425 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | | 2 |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | | 21.0 |
| Total Split (s) | 106.0 | 106.0 | | | | | | | | | | 22.0 |
| Total Split (%) | 82.8% | 82.8% | | | | | | | | | | 17.2% |
| Maximum Green (s) | 102.0 | 102.0 | | | | | | | | | | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | 0.0 |
| Total Lost Time (s) | | 4.0 | | | | | | | | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | | 0 |
| Act Effct Green (s) | | 102.0 | | | | | | | | | | 17.0 |
| Actuated g/C Ratio | | 0.80 | | | | | | | | | | 0.13 |
| v/c Ratio | | 0.23 | | | | | | | | | | 0.98 |
| Control Delay | | 3.4 | | | | | | | | | | 93.0 |
| Queue Delay | | 0.0 | | | | | | | | | | 0.0 |
| Total Delay | | 3.4 | | | | | | | | | | 93.0 |
| LOS | | A | | | | | | | | | | F |
| Approach Delay | | 3.4 | | | | | | | | | | 93.0 |
| Approach LOS | | A | | | | | | | | | | F |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

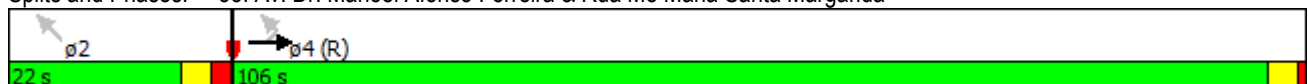


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|-------|
| Stops (vph) | | 117 | | | | | | | | | | 332 |
| Fuel Used(l) | | 5 | | | | | | | | | | 37 |
| CO Emissions (g/hr) | | 99 | | | | | | | | | | 683 |
| NOx Emissions (g/hr) | | 19 | | | | | | | | | | 132 |
| VOC Emissions (g/hr) | | 23 | | | | | | | | | | 158 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 17.2 | | | | | | | | | | 59.9 |
| Queue Length 95th (m) | | 21.1 | | | | | | | | | | #89.3 |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | | 17.9 | | | | 55.5 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2665 | | | | | | | | | | 435 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.23 | | | | | | | | | | 0.98 |

Intersection Summary

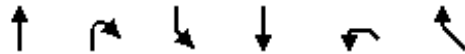
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 128 |
| Actuated Cycle Length: | 128 |
| Offset: | 44 (34%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.98 |
| Intersection Signal Delay: | 40.5 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 37.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
 37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1007 | 0 | 632 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 129.4 | 59.4 | |
| Travel Time (s) | 4.6 | | | 9.3 | 4.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1157 | 0 | 726 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1157 | 0 | 726 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

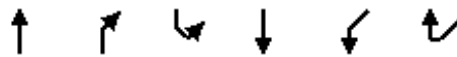
Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

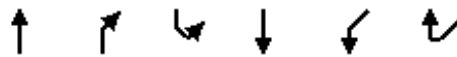
Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑↑ | | | | | | |
| Volume (vph) | 2298 | 1230 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2641 | 1414 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4055 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 98.0 | | | | | | 8.0 |
| Total Split (%) | 92.5% | | | | | | 8% |
| Maximum Green (s) | 92.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 92.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.06dr | | | | | | |
| Control Delay | 23.9 | | | | | | |
| Queue Delay | 34.8 | | | | | | |
| Total Delay | 58.7 | | | | | | |
| LOS | E | | | | | | |
| Approach Delay | 58.7 | | | | | | |

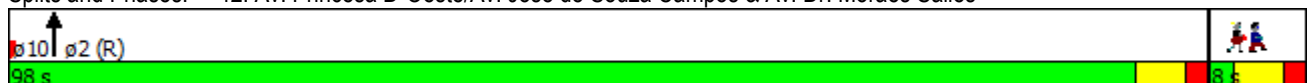


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|--------|-----|-----|------|------|-----|-----|
| Approach LOS | E | | | | | | |
| Stops (vph) | 2393 | | | | | | |
| Fuel Used(l) | 141 | | | | | | |
| CO Emissions (g/hr) | 2622 | | | | | | |
| NOx Emissions (g/hr) | 506 | | | | | | |
| VOC Emissions (g/hr) | 605 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | ~222.4 | | | | | | |
| Queue Length 95th (m) | #226.1 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 39.4 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 4028 | | | | | | |
| Starvation Cap Reductn | 324 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.09 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 106
 Actuated Cycle Length: 106
 Offset: 92 (87%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 100
 Control Type: Pretimed
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 58.7
 Intersection LOS: E
 Intersection Capacity Utilization 76.9%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 323 | 259 | 0 | 2298 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.970 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 371 | 298 | 0 | 2641 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 31% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 463 | 206 | 0 | 2641 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 34.0 | 34.0 | | | | |
| Total Split (%) | | | | | 30.6% | 30.6% | 69.4% | 69.4% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 28.0 | 28.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 28.0 | | | | |
| Actuated g/C Ratio | | | | | 0.20 | 0.20 | | 0.57 | | | | |
| v/c Ratio | | | | | 0.72 | 0.73 | | 0.95 | | | | |
| Control Delay | | | | | 26.3 | 36.8 | | 20.4 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 44.6 | | | | |
| Total Delay | | | | | 26.3 | 36.8 | | 65.0 | | | | |
| LOS | | | | | C | D | | E | | | | |
| Approach Delay | | | | | 29.5 | | | 65.0 | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

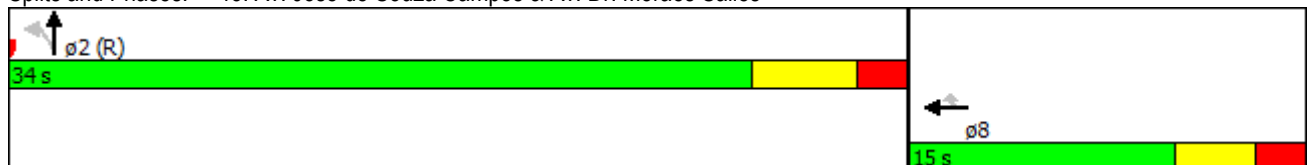


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|-------|-------|-----|--------|-----|-----|------|-----|
| Approach LOS | | | | | C | | | E | | | | |
| Stops (vph) | | | | | 347 | 149 | | 1765 | | | | |
| Fuel Used(l) | | | | | 19 | 10 | | 90 | | | | |
| CO Emissions (g/hr) | | | | | 346 | 178 | | 1665 | | | | |
| NOx Emissions (g/hr) | | | | | 67 | 34 | | 321 | | | | |
| VOC Emissions (g/hr) | | | | | 80 | 41 | | 384 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 21.9 | 19.4 | | 70.6 | | | | |
| Queue Length 95th (m) | | | | | #35.5 | #46.8 | | #112.7 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 643 | 284 | | 2780 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 793 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.72 | 0.73 | | 1.33 | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 49
 Actuated Cycle Length: 49
 Offset: 5 (10%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 57.8
 Intersection LOS: E
 Intersection Capacity Utilization 76.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 732 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.937 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1572 | 3303 | 1641 | 4401 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1572 | 3303 | 1641 | 4401 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 218.5 | |
| Travel Time (s) | | 2.4 | | 15.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 166 | 544 | 767 | 1146 | 841 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 149 | 561 | 767 | 1987 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.49 | 0.88 | 0.62 | 0.60 | |
| Control Delay | 56.7 | 71.1 | 11.0 | 8.9 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 56.7 | 71.1 | 11.0 | 8.9 | |

Lanes, Volumes, Timings
 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019

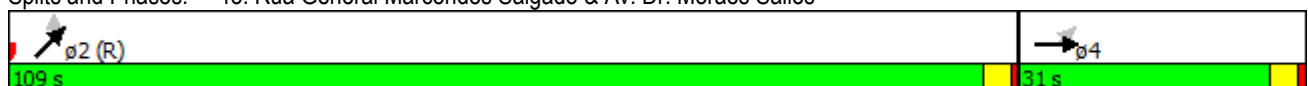


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|--------|-------|-------|-----|
| LOS | E | E | B | A | |
| Approach Delay | | 68.1 | | 9.5 | |
| Approach LOS | | E | | A | |
| Stops (vph) | 115 | 451 | 301 | 734 | |
| Fuel Used(l) | 9 | 38 | 26 | 64 | |
| CO Emissions (g/hr) | 161 | 713 | 488 | 1194 | |
| NOx Emissions (g/hr) | 31 | 138 | 94 | 230 | |
| VOC Emissions (g/hr) | 37 | 165 | 112 | 275 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 43.0 | 88.3 | 93.0 | 85.6 | |
| Queue Length 95th (m) | 66.1 | #113.4 | 119.1 | 90.8 | |
| Internal Link Dist (m) | | 9.3 | | 194.5 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 303 | 637 | 1230 | 3300 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.49 | 0.88 | 0.62 | 0.60 | |

Intersection Summary

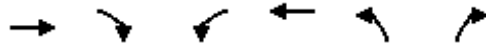
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 5 (4%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 21.5 Intersection LOS: C
 Intersection Capacity Utilization 56.7% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019



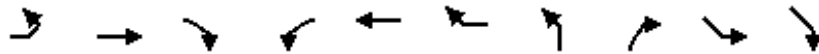
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑ | | | | | |
| Volume (vph) | 1164 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.995 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1338 | 47 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1385 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 26.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade Colombo



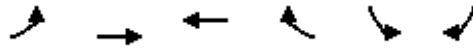
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | ↑ | ↑ | ↑↑ | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 8 | 71 | 767 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 8 | 71 | 767 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 701 | 0 | 0 | 8 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 701 | 0 | 0 | 8 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1164 | 0 | 0 | 2478 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.969 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1338 | 0 | 0 | 2848 | 744 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1338 | 0 | 0 | 3592 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 55.0 | | | 57.0 | | | |
| Total Split (%) | | 49.1% | | | 50.9% | | | |
| Maximum Green (s) | | 51.0 | | | 53.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 51.0 | | | 53.0 | | | |
| Actuated g/C Ratio | | 0.46 | | | 0.47 | | | |
| v/c Ratio | | 0.84 | | | 1.61 | | | |
| Control Delay | | 33.0 | | | 300.9 | | | |
| Queue Delay | | 0.0 | | | 0.5 | | | |
| Total Delay | | 33.0 | | | 301.3 | | | |
| LOS | | C | | | F | | | |
| Approach Delay | | | | | 301.3 | | | |
| Approach LOS | | | | | F | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

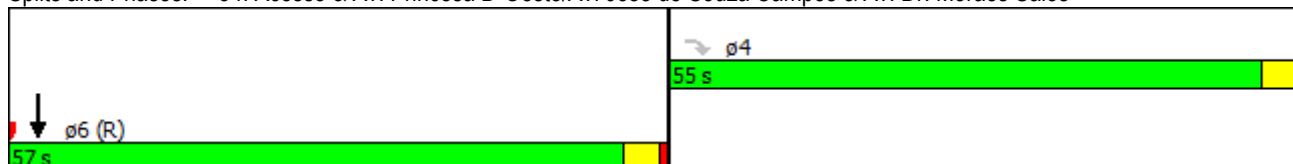


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|-------|-----|------|--------|-----|------|-----|
| Stops (vph) | | 994 | | | 2203 | | | |
| Fuel Used(l) | | 56 | | | 790 | | | |
| CO Emissions (g/hr) | | 1048 | | | 14699 | | | |
| NOx Emissions (g/hr) | | 202 | | | 2837 | | | |
| VOC Emissions (g/hr) | | 242 | | | 3390 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 116.4 | | | ~435.2 | | | |
| Queue Length 95th (m) | | 134.7 | | | #438.5 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1589 | | | 2235 | | | |
| Starvation Cap Reductn | | 0 | | | 387 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.84 | | | 1.94 | | | |

Intersection Summary

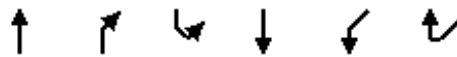
Area Type: Other
 Cycle Length: 112
 Actuated Cycle Length: 112
 Offset: 5 (4%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.61
 Intersection Signal Delay: 228.5
 Intersection LOS: F
 Intersection Capacity Utilization 96.1%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
 56: Rua Barão de Paranapanema & Acesso

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | ↑ | ↘ | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 47 | 744 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 47 | 744 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 978 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 184.1 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.3 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 60 | 1124 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1184 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 51.9% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1307 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 141.1 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.2 | | | 1.6 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 60 | 0 | 0 | 0 | 0 | 1502 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 60 | 0 | 0 | 0 | 0 | 1502 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 51.9% ICU Level of Service A
 Analysis Period (min) 15

Lanes, Volumes, Timings
62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↗↗↗ | | |
| Volume (vph) | 405 | 0 | 0 | 904 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Adj. Flow (vph) | 466 | 0 | 0 | 1039 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 466 | 0 | 0 | 1039 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 23.0 | | | 84.0 | | |
| Total Split (%) | 21.5% | | | 78.5% | | |
| Maximum Green (s) | 16.0 | | | 79.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 16.0 | | | 79.0 | | |
| Actuated g/C Ratio | 0.15 | | | 0.74 | | |
| v/c Ratio | 0.94 | | | 0.29 | | |
| Control Delay | 73.6 | | | 4.9 | | |
| Queue Delay | 60.6 | | | 2.5 | | |
| Total Delay | 134.2 | | | 7.3 | | |
| LOS | F | | | A | | |
| Approach Delay | 134.2 | | | 7.3 | | |
| Approach LOS | F | | | A | | |
| Stops (vph) | 362 | | | 271 | | |
| Fuel Used(l) | 32 | | | 15 | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|-------|-----|-----|------|------|-----|
| CO Emissions (g/hr) | 604 | | | 284 | | |
| NOx Emissions (g/hr) | 117 | | | 55 | | |
| VOC Emissions (g/hr) | 139 | | | 66 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 52.7 | | | 23.6 | | |
| Queue Length 95th (m) | #79.5 | | | 27.5 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 496 | | | 3629 | | |
| Starvation Cap Reductn | 361 | | | 2413 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 3.45 | | | 0.85 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 107
 Actuated Cycle Length: 107
 Offset: 4 (4%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 46.6
 Intersection LOS: D
 Intersection Capacity Utilization 107.4%
 ICU Level of Service G
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

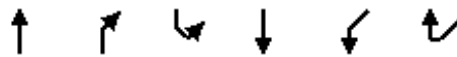
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



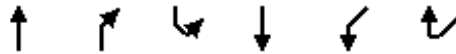
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 2171 | 561 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2495 | 645 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2495 | 645 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 73.0 | 37.0 | |
| Total Split (%) | | | | 66.4% | 33.6% | |
| Maximum Green (s) | | | | 68.0 | 32.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 68.0 | 32.0 | |
| Actuated g/C Ratio | | | | 0.62 | 0.29 | |
| v/c Ratio | | | | 0.81 | 0.66 | |
| Control Delay | | | | 18.9 | 38.2 | |
| Queue Delay | | | | 47.6 | 0.0 | |
| Total Delay | | | | 66.5 | 38.2 | |
| LOS | | | | E | D | |
| Approach Delay | | | | 66.5 | 38.2 | |
| Approach LOS | | | | E | D | |
| Stops (vph) | | | | 1587 | 481 | |



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|-------|------|-----|
| Fuel Used(l) | | | | 75 | 29 | |
| CO Emissions (g/hr) | | | | 1402 | 538 | |
| NOx Emissions (g/hr) | | | | 271 | 104 | |
| VOC Emissions (g/hr) | | | | 323 | 124 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 147.1 | 65.8 | |
| Queue Length 95th (m) | | | | 157.6 | 82.3 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 3068 | 974 | |
| Starvation Cap Reductn | | | | 1404 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.50 | 0.66 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 2 (2%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.81 |
| Intersection Signal Delay: | 60.7 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 66.3% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

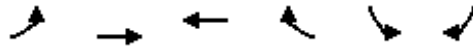
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 474 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 545 | 9 | 0 | 124 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 554 | 0 | 0 | 124 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 26.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 2557 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1311 | 0 | 0 | 0 | 0 | 2939 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1311 | 0 | 0 | 0 | 0 | 2939 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 55.0 | | | | | 34.0 |
| Total Split (%) | 61.8% | | | | | 38.2% |
| Maximum Green (s) | 51.0 | | | | | 28.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 51.0 | | | | | 28.0 |
| Actuated g/C Ratio | 0.57 | | | | | 0.31 |
| v/c Ratio | 0.66 | | | | | 2.65 |
| Control Delay | 15.1 | | | | | 764.7 |
| Queue Delay | 50.3 | | | | | 0.5 |
| Total Delay | 65.4 | | | | | 765.2 |
| LOS | E | | | | | F |
| Approach Delay | 65.4 | | | | | |
| Approach LOS | E | | | | | |

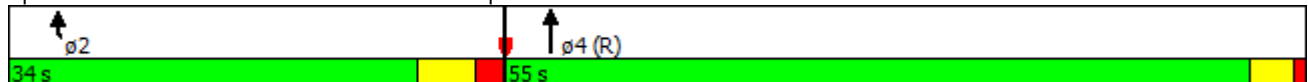


| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|------|-----|-----|------|------|--------|
| Stops (vph) | 743 | | | | | 1900 |
| Fuel Used(l) | 34 | | | | | 1557 |
| CO Emissions (g/hr) | 640 | | | | | 28957 |
| NOx Emissions (g/hr) | 123 | | | | | 5589 |
| VOC Emissions (g/hr) | 148 | | | | | 6679 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 79.2 | | | | | ~395.3 |
| Queue Length 95th (m) | 95.8 | | | | | #413.7 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1979 | | | | | 1108 |
| Starvation Cap Reductn | 1075 | | | | | 122 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.45 | | | | | 2.98 |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 89 |
| Actuated Cycle Length: | 89 |
| Offset: | 5 (6%), Referenced to phase 4:NBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 2.65 |
| Intersection Signal Delay: | 549.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 99.5% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Moraes Machado

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1606 | 471 | 0 | 1756 | 0 | 171 | 750 | 86 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 3% | 2% | 1% | 1% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1846 | 541 | 0 | 2018 | 0 | 197 | 862 | 99 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1900 | 487 | 0 | 2018 | 0 | 0 | 1059 | 99 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 76.0 | 76.0 | | 81.0 | | 45.0 | 45.0 | 45.0 | | |
| Total Split (%) | | 60.3% | 60.3% | | 64.3% | | 35.7% | 35.7% | 35.7% | | |
| Maximum Green (s) | | 72.0 | 72.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 77.0 | 77.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Actuated g/C Ratio | | 0.61 | 0.61 | | 0.60 | | 0.32 | 0.32 | 0.32 | | |
| v/c Ratio | | 1.00 | 0.59 | | 0.71 | | 1.02 | 0.21 | 0.21 | | |
| Control Delay | | 45.7 | 18.6 | | 6.5 | | 74.6 | 32.9 | 32.9 | | |
| Queue Delay | | 21.8 | 0.0 | | 0.4 | | 0.0 | 0.0 | 0.0 | | |
| Total Delay | | 67.5 | 18.6 | | 6.9 | | 74.6 | 32.9 | 32.9 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

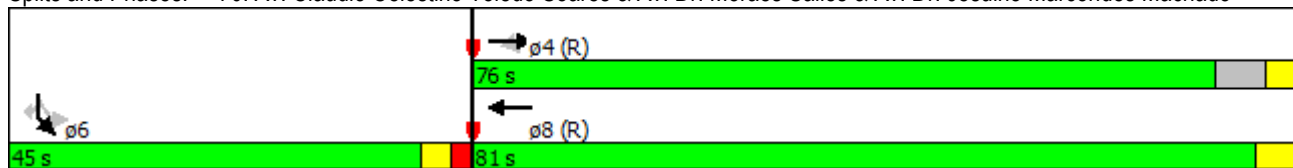


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|-------|-----|------|-----|------|--------|------|------|-----|
| LOS | | E | B | | A | | | E | C | | |
| Approach Delay | | 57.5 | | | 6.9 | | | 71.1 | | | |
| Approach LOS | | E | | | A | | | E | | | |
| Stops (vph) | | 1419 | 253 | | 365 | | | 822 | 62 | | |
| Fuel Used(l) | | 113 | 18 | | 27 | | | 77 | 4 | | |
| CO Emissions (g/hr) | | 2097 | 327 | | 497 | | | 1430 | 76 | | |
| NOx Emissions (g/hr) | | 405 | 63 | | 96 | | | 276 | 15 | | |
| VOC Emissions (g/hr) | | 484 | 75 | | 115 | | | 330 | 18 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~257.3 | 80.0 | | 27.9 | | | ~146.6 | 18.9 | | |
| Queue Length 95th (m) | | #308.9 | 110.7 | | 29.0 | | | #181.3 | 32.3 | | |
| Internal Link Dist (m) | | 121.0 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1898 | 825 | | 2848 | | | 1042 | 480 | | |
| Starvation Cap Reductn | | 0 | 0 | | 345 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 113 | 0 | | 0 | | | 0 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.06 | 0.59 | | 0.81 | | | 1.02 | 0.21 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 126
 Actuated Cycle Length: 126
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 110
 Control Type: Pretimed
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 42.0 Intersection LOS: D
 Intersection Capacity Utilization 143.6% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 563 | 602 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.932 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 731 | 782 | 656 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 731 | 1438 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 66.0% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 204 | 471 | 34 | 198 | 426 | 16 | 14 | 44 | 24 | 15 | 73 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.956 | | | 0.929 | |
| Flt Protected | | 0.986 | | | 0.985 | | | 0.992 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 3118 | 0 | 0 | 3069 | 0 |
| Flt Permitted | | 0.986 | | | 0.985 | | | 0.864 | | | 0.916 | |
| Satd. Flow (perm) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 2716 | 0 | 0 | 2823 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 101.8 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 265 | 612 | 44 | 257 | 553 | 21 | 18 | 57 | 31 | 19 | 95 | 103 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 921 | 0 | 0 | 831 | 0 | 0 | 106 | 0 | 0 | 217 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | | 6 |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 24.0 | 24.0 | | 26.0 | 26.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 38.1% | 38.1% | | 41.3% | 41.3% | | 20.6% | 20.6% | | 20.6% | 20.6% | |
| Maximum Green (s) | 18.0 | 18.0 | | 20.0 | 20.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 18.0 | | | 20.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.32 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 0.99 | | | 0.82 | | | 0.31 | | | 0.61 | |
| Control Delay | | 53.2 | | | 28.2 | | | 27.7 | | | 33.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 53.2 | | | 28.2 | | | 27.7 | | | 33.9 | |
| LOS | | D | | | C | | | C | | | C | |
| Approach Delay | | 53.2 | | | 28.2 | | | 27.7 | | | 33.9 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

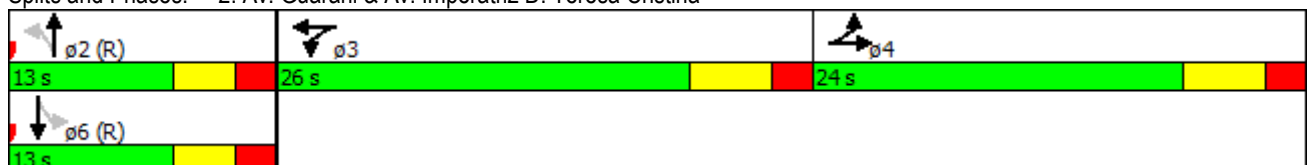


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-----|-------|-----|-----|-----|------|-----|-----|
| Approach LOS | | D | | | | C | | | | C | | |
| Stops (vph) | | 682 | | | | 617 | | | | 81 | | |
| Fuel Used(l) | | 62 | | | | 55 | | | | 5 | | |
| CO Emissions (g/hr) | | 1155 | | | | 1020 | | | | 84 | | |
| NOx Emissions (g/hr) | | 223 | | | | 197 | | | | 16 | | |
| VOC Emissions (g/hr) | | 266 | | | | 235 | | | | 19 | | |
| Dilemma Vehicles (#) | | 0 | | | | 0 | | | | 0 | | |
| Queue Length 50th (m) | | 58.7 | | | | 48.5 | | | | 6.3 | | |
| Queue Length 95th (m) | | #91.9 | | | | #67.7 | | | | 12.6 | | |
| Internal Link Dist (m) | | 77.9 | | | | 63.4 | | | | 62.2 | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 927 | | | | 1017 | | | | 344 | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | | | 0 | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | | | 0 | | |
| Storage Cap Reductn | | 0 | | | | 0 | | | | 0 | | |
| Reduced v/c Ratio | | 0.99 | | | | 0.82 | | | | 0.31 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 63
 Actuated Cycle Length: 63
 Offset: 24 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 39.9
 Intersection LOS: D
 Intersection Capacity Utilization 70.3%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1875 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% 4% | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | 0.991 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 143.7 | | | 132.8 283.4 | | |
| Travel Time (s) | 10.3 | | | 9.6 20.4 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2435 | 160 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2595 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | | |
| Sign Control | Stop | | | Stop | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 47.4% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 423 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 1269 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.988 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 549 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 792 | 1648 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 598 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2440 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | 84.0 | 84.0 | |
| Total Split (%) | | 21.5% | | | | | | | | 78.5% | 78.5% | |
| Maximum Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 79.0 | |
| Actuated g/C Ratio | | 0.15 | | | | | | | | | 0.74 | |
| v/c Ratio | | 1.21 | | | | | | | | | 0.72 | |
| Control Delay | | 151.3 | | | | | | | | | 9.4 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.4 | |
| Total Delay | | 151.3 | | | | | | | | | 56.8 | |
| LOS | | F | | | | | | | | | E | |
| Approach Delay | | 151.3 | | | | | | | | | 56.8 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019

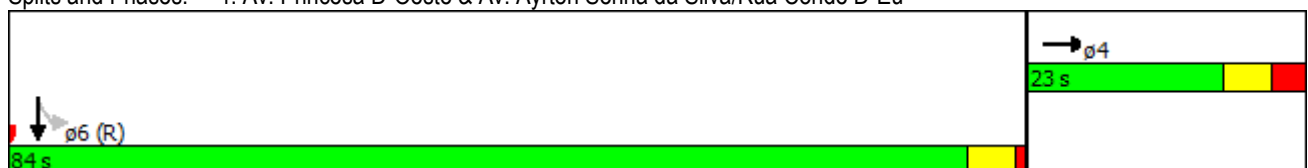


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Approach LOS | | F | | | | | | | | | | E |
| Stops (vph) | | 426 | | | | | | | | | | 1089 |
| Fuel Used(l) | | 73 | | | | | | | | | | 49 |
| CO Emissions (g/hr) | | 1358 | | | | | | | | | | 908 |
| NOx Emissions (g/hr) | | 262 | | | | | | | | | | 175 |
| VOC Emissions (g/hr) | | 313 | | | | | | | | | | 209 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | -84.4 | | | | | | | | | | 93.4 |
| Queue Length 95th (m) | | #114.5 | | | | | | | | | | 101.1 |
| Internal Link Dist (m) | | 35.9 | | | 7.7 | | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 495 | | | | | | | | | | 3392 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 1411 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 1.21 | | | | | | | | | | 1.23 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 107 |
| Actuated Cycle Length: | 107 |
| Offset: | 58 (54%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.21 |
| Intersection Signal Delay: | 75.4 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 66.3% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1879 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.953 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 526 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2441 | 1108 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 526 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3549 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | | 77.0 | |
| Total Split (%) | | 23.0% | | | | | | | | | 77.0% | |
| Maximum Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Actuated g/C Ratio | | 0.16 | | | | | | | | | 0.72 | |
| v/c Ratio | | 0.99 | | | | | | | | | 1.05 | |
| Control Delay | | 79.9 | | | | | | | | | 44.5 | |
| Queue Delay | | 0.0 | | | | | | | | | 23.6 | |
| Total Delay | | 79.9 | | | | | | | | | 68.1 | |
| LOS | | E | | | | | | | | | E | |
| Approach Delay | | 79.9 | | | | | | | | | 68.1 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019

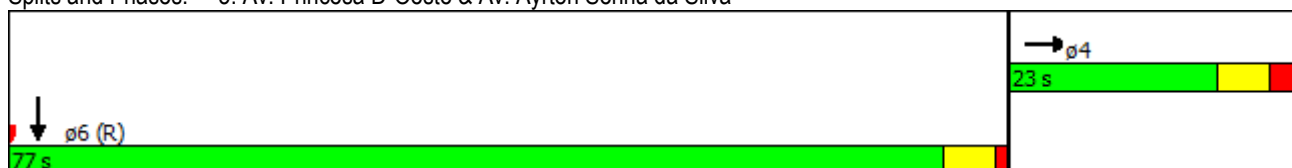


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|--------|-----|
| Approach LOS | | E | | | | | | | | | E | |
| Stops (vph) | | 404 | | | | | | | | | 2533 | |
| Fuel Used(l) | | 40 | | | | | | | | | 183 | |
| CO Emissions (g/hr) | | 750 | | | | | | | | | 3397 | |
| NOx Emissions (g/hr) | | 145 | | | | | | | | | 656 | |
| VOC Emissions (g/hr) | | 173 | | | | | | | | | 783 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | 0 | |
| Queue Length 50th (m) | | 57.0 | | | | | | | | | ~289.4 | |
| Queue Length 95th (m) | | #87.3 | | | | | | | | | #297.2 | |
| Internal Link Dist (m) | | 47.4 | | | 12.6 | | | 21.2 | | | 44.4 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 531 | | | | | | | | | 3396 | |
| Starvation Cap Reductn | | 0 | | | | | | | | | 615 | |
| Spillback Cap Reductn | | 0 | | | | | | | | | 0 | |
| Storage Cap Reductn | | 0 | | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.99 | | | | | | | | | 1.28 | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 58 (58%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 120 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 69.6 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 85.2% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 1868 | 7 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1542 | 4960 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1542 | 4960 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 394 | 2426 | 9 | 492 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 394 | 2435 | 0 | 492 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 65.0 | | 37.0 |
| Total Split (%) | | 63.7% | | 36.3% |
| Maximum Green (s) | | 60.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 102.0 | 60.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.59 | | 0.31 |
| v/c Ratio | 0.26 | 0.83 | | 0.46 |
| Control Delay | 0.4 | 20.3 | | 29.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.4 | 20.3 | | 29.8 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

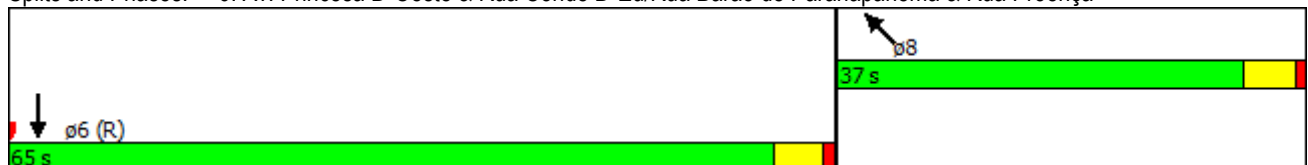


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | C | | C |
| Approach Delay | | 20.3 | | 29.8 |
| Approach LOS | | C | | C |
| Stops (vph) | 0 | 1632 | | 333 |
| Fuel Used(l) | 1 | 96 | | 19 |
| CO Emissions (g/hr) | 24 | 1794 | | 345 |
| NOx Emissions (g/hr) | 5 | 346 | | 67 |
| VOC Emissions (g/hr) | 6 | 414 | | 80 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 140.4 | | 43.1 |
| Queue Length 95th (m) | 0.0 | 152.5 | | 56.4 |
| Internal Link Dist (m) | | 108.8 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1542 | 2917 | | 1062 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.26 | 0.83 | | 0.46 |

Intersection Summary

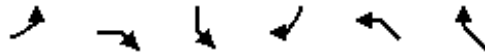
| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 102 |
| Actuated Cycle Length: | 102 |
| Offset: | 58 (57%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.83 |
| Intersection Signal Delay: | 19.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 61.1% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations | ↖ ↗ | | | | ↖ ↗ | | |
| Volume (vph) | 1644 | 0 | 0 | 0 | 0 | 1884 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 2135 | 0 | 0 | 0 | 0 | 2447 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2135 | 0 | 0 | 0 | 0 | 2447 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | Prot | | | Prot | | | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | | 2 |
| Minimum Split (s) | | | | | | 22.0 | 22.0 |
| Total Split (s) | | | | | | 43.0 | 65.0 |
| Total Split (%) | 60.2% | | | | | 39.8% | 60% |
| Maximum Green (s) | | | | | | 37.0 | 59.0 |
| Yellow Time (s) | | | | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | | | | 0.0 | |
| Total Lost Time (s) | | | | | | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 | 0 |
| Act Effct Green (s) | 59.0 | | | | | 37.0 | |
| Actuated g/C Ratio | 0.55 | | | | | 0.34 | |
| v/c Ratio | 1.17 | | | | | 2.07 | |
| Control Delay | 106.7 | | | | | 507.0 | |
| Queue Delay | 0.0 | | | | | 0.0 | |
| Total Delay | 106.7 | | | | | 507.0 | |
| LOS | F | | | | | F | |
| Approach Delay | 106.7 | | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019

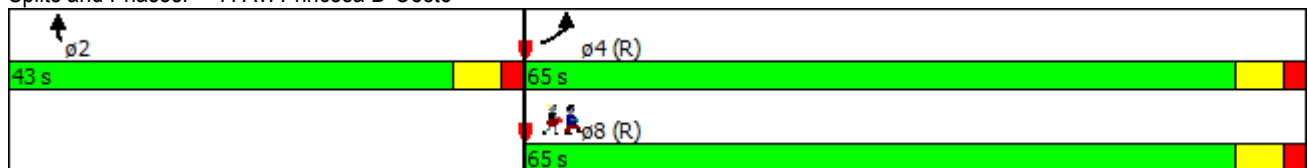


| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|------------------------|--------|-----|------|--------|-------|-----|----|
| Approach LOS | F | | | | | | |
| Stops (vph) | 1548 | | | 1425 | | | |
| Fuel Used(l) | 191 | | | 953 | | | |
| CO Emissions (g/hr) | 3559 | | | 17730 | | | |
| NOx Emissions (g/hr) | 687 | | | 3422 | | | |
| VOC Emissions (g/hr) | 821 | | | 4089 | | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | | |
| Queue Length 50th (m) | ~290.7 | | | ~376.3 | | | |
| Queue Length 95th (m) | #315.5 | | | #394.7 | | | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 1830 | | | 1183 | | | |
| Starvation Cap Reductn | 0 | | | 0 | | | |
| Spillback Cap Reductn | 0 | | | 0 | | | |
| Storage Cap Reductn | 0 | | | 0 | | | |
| Reduced v/c Ratio | 1.17 | | | 2.07 | | | |

Intersection Summary

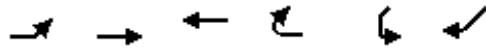
Area Type: Other
 Cycle Length: 108
 Actuated Cycle Length: 108
 Offset: 0 (0%), Referenced to phase 4:EBL and 8:Ped, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.07
 Intersection Signal Delay: 320.5 Intersection LOS: F
 Intersection Capacity Utilization 112.6% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 405 | 461 | 0 | 0 | 0 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 526 | 599 | 0 | 0 | 0 | 1108 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 526 | 599 | 0 | 0 | 0 | 1108 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 159 | 241 | 15 | 112 | 304 | 38 | 11 | 166 | 163 | 15 | 284 | 362 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | 0.989 | | | 0.935 | | | 0.926 | |
| Flt Protected | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Flt Permitted | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 125.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 9.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 207 | 313 | 19 | 145 | 395 | 49 | 14 | 216 | 212 | 19 | 369 | 470 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 539 | 0 | 0 | 589 | 0 | 0 | 442 | 0 | 0 | 858 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 97.0% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 319 | 769 | 452 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.865 | 0.944 | |
| Flt Protected | | | | | 0.969 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1816 | 3247 | 0 |
| Flt Permitted | | | | | 0.969 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1816 | 3247 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Confl. Peds. (#/hr) | | | | | 452 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 414 | 999 | 587 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 414 | 1586 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 44.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 323 | 2802 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4846 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4846 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 420 | 3639 | 90 | 1482 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 420 | 3729 | 0 | 1482 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 55.0 | 50.0 | | 49.0 |
| Total Split (%) | 52.4% | 47.6% | | 46.7% |
| Maximum Green (s) | 51.0 | 44.0 | | 44.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 51.0 | 44.0 | | 50.0 |
| Actuated g/C Ratio | 0.49 | 0.42 | | 0.48 |
| v/c Ratio | 0.26 | 1.84 | | 0.66 |
| Control Delay | 16.4 | 402.5 | | 22.8 |
| Queue Delay | 60.3 | 0.0 | | 49.7 |
| Total Delay | 76.8 | 402.5 | | 72.5 |
| LOS | E | F | | E |
| Approach Delay | | 402.5 | | 72.5 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

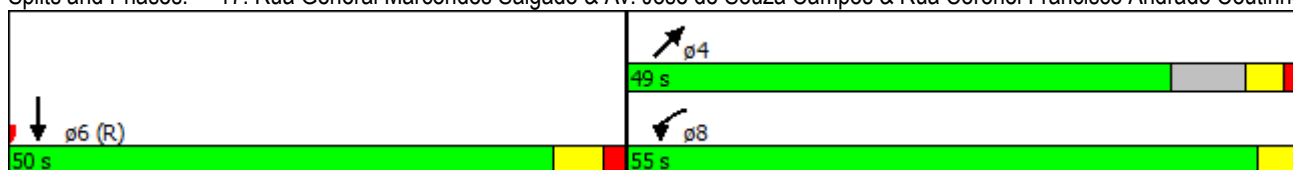


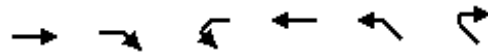
| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|--------|------|------|
| Approach LOS | | F | | E |
| Stops (vph) | 205 | 2222 | | 943 |
| Fuel Used(l) | 10 | 1118 | | 51 |
| CO Emissions (g/hr) | 192 | 20787 | | 957 |
| NOx Emissions (g/hr) | 37 | 4012 | | 185 |
| VOC Emissions (g/hr) | 44 | 4794 | | 221 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 26.4 | ~446.4 | | 86.3 |
| Queue Length 95th (m) | 35.2 | #450.8 | | 97.6 |
| Internal Link Dist (m) | | 180.5 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1627 | 2030 | | 2245 |
| Starvation Cap Reductn | 1341 | 0 | | 1219 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.47 | 1.84 | | 1.44 |

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.84
 Intersection Signal Delay: 291.3
 Intersection LOS: F
 Intersection Capacity Utilization 110.7%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho





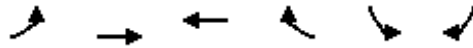
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 646 | 442 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.939 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3213 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3213 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 839 | 574 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1413 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.88 | 0.88 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.5% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 96 | 394 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 96 | 394 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.9% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 386 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 501 | 96 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 501 | 96 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 105 | 928 | 0 | 0 | 0 | 0 | 0 | 799 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.973 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 136 | 1205 | 0 | 0 | 0 | 0 | 0 | 1038 | 232 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1341 | 0 | 0 | 0 | 0 | 0 | 1270 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 23.0 | 23.0 | | | | | | 30.0 | | | | |
| Total Split (%) | 43.4% | 43.4% | | | | | | 56.6% | | | | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 25.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 25.0 | | | | |
| Actuated g/C Ratio | | 0.30 | | | | | | 0.47 | | | | |
| v/c Ratio | | 1.31 | | | | | | 0.59 | | | | |
| Control Delay | | 166.6 | | | | | | 11.6 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 166.6 | | | | | | 11.6 | | | | |
| LOS | | F | | | | | | B | | | | |
| Approach Delay | | 166.6 | | | | | | 11.6 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

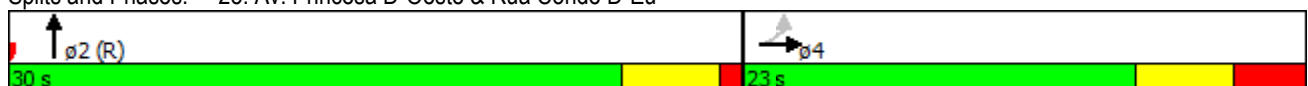


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | F | | | | | | B | | | | |
| Stops (vph) | | 956 | | | | | | 739 | | | | |
| Fuel Used(l) | | 175 | | | | | | 29 | | | | |
| CO Emissions (g/hr) | | 3246 | | | | | | 545 | | | | |
| NOx Emissions (g/hr) | | 627 | | | | | | 105 | | | | |
| VOC Emissions (g/hr) | | 749 | | | | | | 126 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | ~94.8 | | | | | | 31.4 | | | | |
| Queue Length 95th (m) | | #124.4 | | | | | | 40.9 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1027 | | | | | | 2168 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 1.31 | | | | | | 0.59 | | | | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 53 |
| Actuated Cycle Length: | 53 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.31 |
| Intersection Signal Delay: | 91.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 64.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

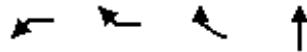
Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu



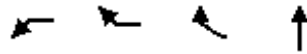
Lanes, Volumes, Timings

26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 561 | 379 | 225 | 1309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.956 | 0.850 | | |
| Flt Protected | 0.966 | | | |
| Satd. Flow (prot) | 3239 | 1371 | 0 | 4964 |
| Flt Permitted | 0.966 | | | |
| Satd. Flow (perm) | 3239 | 1371 | 0 | 4964 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 729 | 492 | 292 | 1700 |
| Shared Lane Traffic (%) | | 62% | | |
| Lane Group Flow (vph) | 1034 | 479 | 0 | 1700 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 30.0 | 30.0 | | 73.0 |
| Total Split (%) | 29.1% | 29.1% | | 70.9% |
| Maximum Green (s) | 25.0 | 25.0 | | 68.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 25.0 | 25.0 | | 68.0 |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.66 |
| v/c Ratio | 1.32 | 1.44 | | 0.52 |
| Control Delay | 184.4 | 247.1 | | 9.7 |
| Queue Delay | 0.0 | 0.0 | | 48.4 |
| Total Delay | 184.4 | 247.1 | | 58.2 |
| LOS | F | F | | E |
| Approach Delay | 204.3 | | | 58.2 |

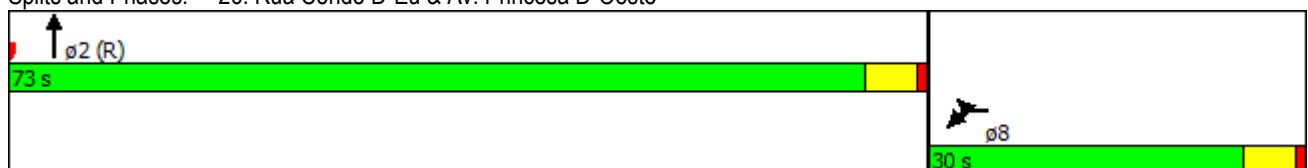


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|--------|--------|------|------|
| Approach LOS | F | | | E |
| Stops (vph) | 720 | 313 | | 709 |
| Fuel Used(l) | 153 | 91 | | 37 |
| CO Emissions (g/hr) | 2848 | 1685 | | 681 |
| NOx Emissions (g/hr) | 550 | 325 | | 131 |
| VOC Emissions (g/hr) | 657 | 389 | | 157 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | ~145.4 | ~151.2 | | 61.0 |
| Queue Length 95th (m) | #176.7 | #210.7 | | 68.3 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 786 | 332 | | 3277 |
| Starvation Cap Reductn | 0 | 0 | | 1751 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.32 | 1.44 | | 1.11 |

Intersection Summary

Area Type: Other
 Cycle Length: 103
 Actuated Cycle Length: 103
 Offset: 2 (2%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 1.44
 Intersection Signal Delay: 127.0
 Intersection LOS: F
 Intersection Capacity Utilization 65.9%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1644 | 1998 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Fr | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2135 | 2595 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2135 | 2595 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 98.0 | 98.0 | 8.0 |
| Total Split (%) | | | | | 92.5% | 92.5% | 8% |
| Maximum Green (s) | | | | | 92.0 | 92.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 92.0 | 92.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.75 | 0.61 | |
| Control Delay | | | | | 4.7 | 2.7 | |
| Queue Delay | | | | | 14.4 | 4.6 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 19.0 | 7.3 | |
| LOS | | | | | B | A | |
| Approach Delay | | | | | | 12.6 | |
| Approach LOS | | | | | | B | |
| Stops (vph) | | | | | 596 | 520 | |
| Fuel Used(l) | | | | | 35 | 34 | |
| CO Emissions (g/hr) | | | | | 643 | 632 | |
| NOx Emissions (g/hr) | | | | | 124 | 122 | |
| VOC Emissions (g/hr) | | | | | 148 | 146 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 56.3 | 36.4 | |
| Queue Length 95th (m) | | | | | 65.1 | 39.1 | |
| Internal Link Dist (m) | 0.1 | | 259.4 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2850 | 4222 | |
| Starvation Cap Reductn | | | | | 748 | 1547 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 1.02 | 0.97 | |

Intersection Summary

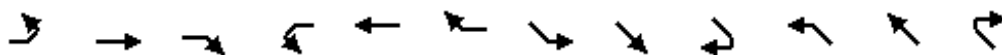
| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 5 (5%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.75 |
| Intersection Signal Delay: | 12.6 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 64.5% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

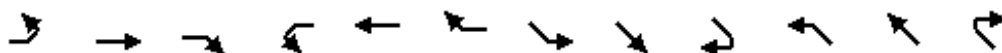
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 1777 | 0 | 0 | 1612 | 214 | 0 | 0 | 0 | 144 | 418 | 102 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.982 | | | | | | 0.996 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1721 | 1483 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1721 | 1483 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 1% | 0% |
| Adj. Flow (vph) | 0 | 2308 | 0 | 0 | 2094 | 278 | 0 | 0 | 0 | 187 | 543 | 132 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 10% |
| Lane Group Flow (vph) | 0 | 2308 | 0 | 0 | 2372 | 0 | 0 | 0 | 0 | 187 | 556 | 119 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | | 81.0 | | | 76.0 | | | | | 45.0 | 45.0 | 45.0 |
| Total Split (%) | | 64.3% | | | 60.3% | | | | | 35.7% | 35.7% | 35.7% |
| Maximum Green (s) | | 76.0 | | | 72.0 | | | | | 40.0 | 40.0 | 40.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 76.0 | | | 77.0 | | | | | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | | 0.60 | | | 0.61 | | | | | 0.32 | 0.32 | 0.32 |
| v/c Ratio | | 0.81 | | | 0.84 | | | | | 0.34 | 1.02 | 0.25 |
| Control Delay | | 5.6 | | | 23.2 | | | | | 35.0 | 85.9 | 33.8 |
| Queue Delay | | 47.1 | | | 0.2 | | | | | 74.6 | 37.5 | 79.2 |
| Total Delay | | 52.7 | | | 23.5 | | | | | 109.7 | 123.4 | 113.0 |
| LOS | | D | | | C | | | | | F | F | F |
| Approach Delay | | 52.7 | | | 23.5 | | | | | | 119.0 | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles

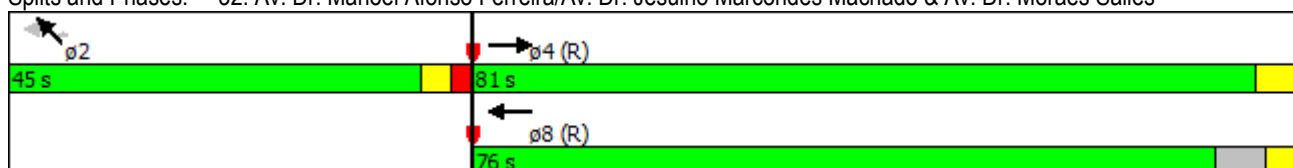


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|-------|-----|-----|------|-----|------|--------|------|
| Approach LOS | | D | | | C | | | | | | | F |
| Stops (vph) | | 704 | | | 1588 | | | | | 122 | 420 | 75 |
| Fuel Used(l) | | 36 | | | 111 | | | | | 8 | 43 | 5 |
| CO Emissions (g/hr) | | 663 | | | 2069 | | | | | 145 | 806 | 89 |
| NOx Emissions (g/hr) | | 128 | | | 399 | | | | | 28 | 156 | 17 |
| VOC Emissions (g/hr) | | 153 | | | 477 | | | | | 33 | 186 | 21 |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Queue Length 50th (m) | | 32.6 | | | 170.9 | | | | | 37.3 | ~161.4 | 24.2 |
| Queue Length 95th (m) | | m27.9 | | | 180.9 | | | | | 56.0 | #223.1 | 40.0 |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 35.4 | | | 17.9 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2848 | | | 2819 | | | | | 553 | 546 | 470 |
| Starvation Cap Reductn | | 907 | | | 0 | | | | | 435 | 315 | 373 |
| Spillback Cap Reductn | | 0 | | | 78 | | | | | 23 | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Reduced v/c Ratio | | 1.19 | | | 0.87 | | | | | 1.58 | 2.41 | 1.23 |

Intersection Summary

Area Type: Other
 Cycle Length: 126
 Actuated Cycle Length: 126
 Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 50.5
 Intersection LOS: D
 Intersection Capacity Utilization 161.3%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

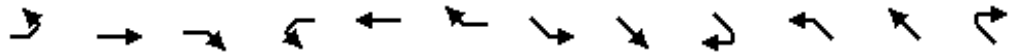
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

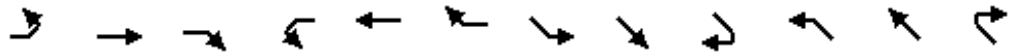


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | | ↕↕ | |
| Volume (vph) | 351 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.978 | |
| Flt Protected | | 0.968 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3345 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Flt Permitted | | 0.968 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3345 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 456 | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 | 69 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 681 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 481 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | | 2 |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | | 21.0 |
| Total Split (s) | 106.0 | 106.0 | | | | | | | | | | 22.0 |
| Total Split (%) | 82.8% | 82.8% | | | | | | | | | | 17.2% |
| Maximum Green (s) | 102.0 | 102.0 | | | | | | | | | | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | 0.0 |
| Total Lost Time (s) | | 4.0 | | | | | | | | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | | 0 |
| Act Effct Green (s) | | 102.0 | | | | | | | | | | 17.0 |
| Actuated g/C Ratio | | 0.80 | | | | | | | | | | 0.13 |
| v/c Ratio | | 0.26 | | | | | | | | | | 1.11 |
| Control Delay | | 3.6 | | | | | | | | | | 125.5 |
| Queue Delay | | 0.0 | | | | | | | | | | 0.0 |
| Total Delay | | 3.6 | | | | | | | | | | 125.5 |
| LOS | | A | | | | | | | | | | F |
| Approach Delay | | 3.6 | | | | | | | | | | 125.5 |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

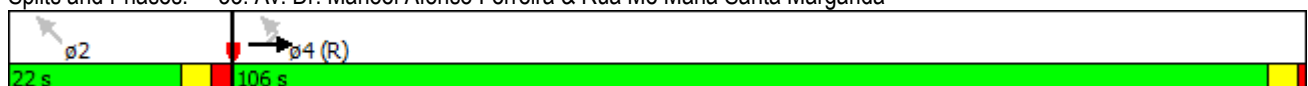


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|--------|
| Approach LOS | | A | | | | | | | | | | F |
| Stops (vph) | | 136 | | | | | | | | | | 357 |
| Fuel Used(l) | | 6 | | | | | | | | | | 52 |
| CO Emissions (g/hr) | | 114 | | | | | | | | | | 958 |
| NOx Emissions (g/hr) | | 22 | | | | | | | | | | 185 |
| VOC Emissions (g/hr) | | 26 | | | | | | | | | | 221 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 20.0 | | | | | | | | | | ~76.3 |
| Queue Length 95th (m) | | 24.2 | | | | | | | | | | #106.5 |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | | 17.9 | | | | 55.5 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2665 | | | | | | | | | | 435 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.26 | | | | | | | | | | 1.11 |

Intersection Summary

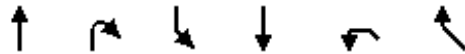
Area Type: Other
 Cycle Length: 128
 Actuated Cycle Length: 128
 Offset: 44 (34%), Referenced to phase 4:EBTL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 54.0 Intersection LOS: D
 Intersection Capacity Utilization 41.3% ICU Level of Service A
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



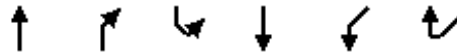
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1007 | 0 | 632 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 129.4 | 59.4 | |
| Travel Time (s) | 4.6 | | | 9.3 | 4.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1308 | 0 | 821 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1308 | 0 | 821 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.8% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

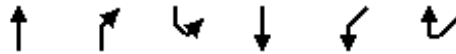


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑↑ | | | | | | |
| Volume (vph) | 2298 | 1230 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2985 | 1598 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4583 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 98.0 | | | | | | 8.0 |
| Total Split (%) | 92.5% | | | | | | 8% |
| Maximum Green (s) | 92.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 92.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.19dr | | | | | | |
| Control Delay | 77.3 | | | | | | |
| Queue Delay | 0.0 | | | | | | |
| Total Delay | 77.3 | | | | | | |
| LOS | E | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

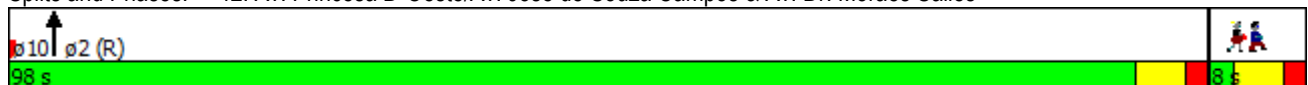


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|--------|-----|-----|------|------|-----|-----|
| Approach Delay | 77.3 | | | | | | |
| Approach LOS | E | | | | | | |
| Stops (vph) | 2891 | | | | | | |
| Fuel Used(l) | 327 | | | | | | |
| CO Emissions (g/hr) | 6087 | | | | | | |
| NOx Emissions (g/hr) | 1175 | | | | | | |
| VOC Emissions (g/hr) | 1404 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | ~426.7 | | | | | | |
| Queue Length 95th (m) | #421.5 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 39.4 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 4028 | | | | | | |
| Starvation Cap Reductn | 29 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.15 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 106
 Actuated Cycle Length: 106
 Offset: 92 (87%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 77.3
 Intersection LOS: E
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 323 | 259 | 0 | 2298 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.970 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 420 | 336 | 0 | 2985 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 31% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 524 | 232 | 0 | 2985 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 34.0 | 34.0 | | | | |
| Total Split (%) | | | | | 30.6% | 30.6% | 69.4% | 69.4% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 28.0 | 28.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 28.0 | | | | |
| Actuated g/C Ratio | | | | | 0.20 | 0.20 | | 0.57 | | | | |
| v/c Ratio | | | | | 0.81 | 0.82 | | 1.07 | | | | |
| Control Delay | | | | | 31.7 | 45.7 | | 54.8 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 11.8 | | | | |
| Total Delay | | | | | 31.7 | 45.7 | | 66.7 | | | | |
| LOS | | | | | C | D | | E | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

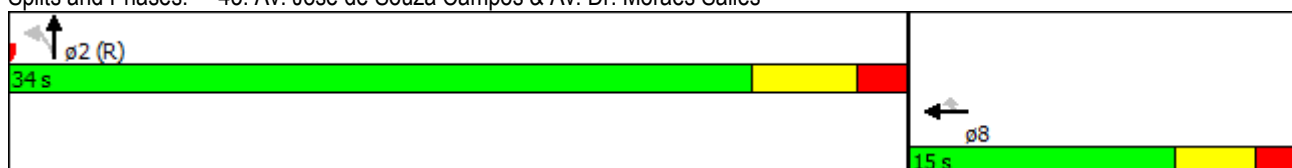


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|-------|-------|-----|--------|-----|-----|------|-----|
| Approach Delay | | | | | 36.0 | | | 66.7 | | | | |
| Approach LOS | | | | | D | | | E | | | | |
| Stops (vph) | | | | | 389 | 165 | | 2057 | | | | |
| Fuel Used(l) | | | | | 23 | 12 | | 171 | | | | |
| CO Emissions (g/hr) | | | | | 425 | 226 | | 3187 | | | | |
| NOx Emissions (g/hr) | | | | | 82 | 44 | | 615 | | | | |
| VOC Emissions (g/hr) | | | | | 98 | 52 | | 735 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 25.3 | 22.5 | | ~116.9 | | | | |
| Queue Length 95th (m) | | | | | #45.7 | #54.2 | | #137.6 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 643 | 284 | | 2780 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 655 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.81 | 0.82 | | 1.40 | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 49
 Actuated Cycle Length: 49
 Offset: 5 (10%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 60.5
 Intersection LOS: E
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|--------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 732 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.936 | |
| Flt Protected | 0.950 | 0.999 | 0.950 | | |
| Satd. Flow (prot) | 1572 | 3306 | 1641 | 4396 | 0 |
| Flt Permitted | 0.950 | 0.999 | 0.950 | | |
| Satd. Flow (perm) | 1572 | 3306 | 1641 | 4396 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 218.5 | |
| Travel Time (s) | | 2.4 | | 15.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 187 | 614 | 866 | 1295 | 951 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 168 | 633 | 866 | 2246 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.55 | 0.99 | 0.70 | 0.87dr | |
| Control Delay | 59.0 | 90.1 | 13.2 | 10.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |

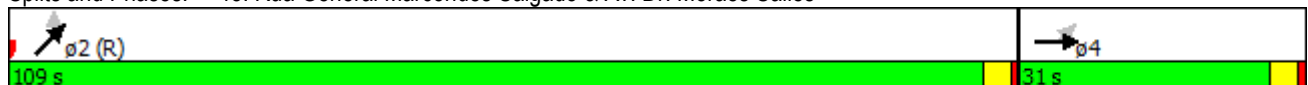


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|--------|-------|-------|-----|
| Total Delay | 59.0 | 90.1 | 13.2 | 10.3 | |
| LOS | E | F | B | B | |
| Approach Delay | | 83.6 | | 11.1 | |
| Approach LOS | | F | | B | |
| Stops (vph) | 131 | 497 | 388 | 934 | |
| Fuel Used(l) | 10 | 51 | 32 | 77 | |
| CO Emissions (g/hr) | 186 | 950 | 595 | 1431 | |
| NOx Emissions (g/hr) | 36 | 183 | 115 | 276 | |
| VOC Emissions (g/hr) | 43 | 219 | 137 | 330 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 49.2 | 102.3 | 118.5 | 108.4 | |
| Queue Length 95th (m) | 73.9 | #137.6 | 152.0 | 113.8 | |
| Internal Link Dist (m) | | 9.3 | | 194.5 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 303 | 637 | 1230 | 3297 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.55 | 0.99 | 0.70 | 0.68 | |

Intersection Summary

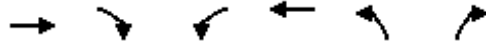
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 5 (4%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 25.9 Intersection LOS: C
 Intersection Capacity Utilization 63.2% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019
















| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1164 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.995 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1512 | 53 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1565 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

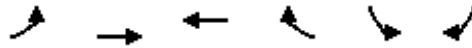
Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade

| |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
| Lane Configurations | | | | |  |  |  | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | | 0.850 | | | | |
| Fl _t Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Fl _t Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 9 | 81 | 866 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 9 | 81 | 866 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |
| Intersection Summary | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | |
| Control Type: | Unsignalized | | | | | | | | | |
| Intersection Capacity Utilization | 43.2% | | | | | ICU Level of Service A | | | | |
| Analysis Period (min) | 15 | | | | | | | | | |

Lanes, Volumes, Timings
 53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 792 | 0 | 0 | 9 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 792 | 0 | 0 | 9 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1164 | 0 | 0 | 2478 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr't | | 0.850 | | | 0.969 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1512 | 0 | 0 | 3219 | 840 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1512 | 0 | 0 | 4059 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 55.0 | | | 57.0 | | | |
| Total Split (%) | | 49.1% | | | 50.9% | | | |
| Maximum Green (s) | | 51.0 | | | 53.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 51.0 | | | 53.0 | | | |
| Actuated g/C Ratio | | 0.46 | | | 0.47 | | | |
| v/c Ratio | | 0.95 | | | 1.82 | | | |
| Control Delay | | 43.6 | | | 392.8 | | | |
| Queue Delay | | 0.0 | | | 0.2 | | | |
| Total Delay | | 43.6 | | | 393.0 | | | |
| LOS | | D | | | F | | | |
| Approach Delay | | | | | 393.0 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

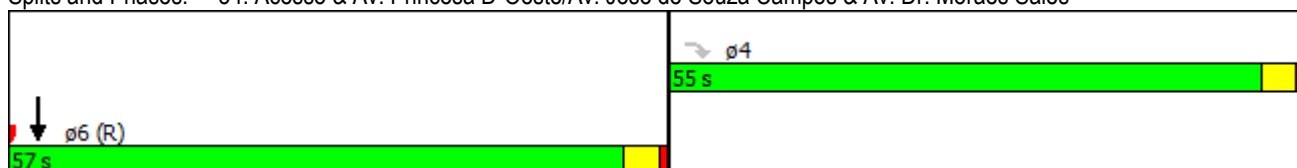


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|--------|-----|------|--------|-----|------|-----|
| Approach LOS | | | | | F | | | |
| Stops (vph) | | 1156 | | | 2385 | | | |
| Fuel Used(l) | | 75 | | | 1140 | | | |
| CO Emissions (g/hr) | | 1396 | | | 21213 | | | |
| NOx Emissions (g/hr) | | 269 | | | 4094 | | | |
| VOC Emissions (g/hr) | | 322 | | | 4893 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 143.1 | | | ~517.3 | | | |
| Queue Length 95th (m) | | #176.1 | | | #515.4 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1589 | | | 2235 | | | |
| Starvation Cap Reductn | | 0 | | | 200 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.95 | | | 1.99 | | | |

Intersection Summary

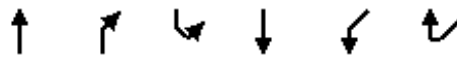
Area Type: Other
 Cycle Length: 112
 Actuated Cycle Length: 112
 Offset: 5 (4%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.82
 Intersection Signal Delay: 298.2
 Intersection LOS: F
 Intersection Capacity Utilization 107.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019



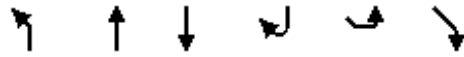
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 53 | 840 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 53 | 840 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 978 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 184.1 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.3 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 1270 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1338 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.7% ICU Level of Service B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1307 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 141.1 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.2 | | | 1.6 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 0 | 0 | 0 | 0 | 1698 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 68 | 0 | 0 | 0 | 0 | 1698 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↗ | | | ↑↑↑ | | |
| Volume (vph) | 405 | 0 | 0 | 904 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 526 | 0 | 0 | 1174 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 526 | 0 | 0 | 1174 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 23.0 | | | 84.0 | | |
| Total Split (%) | 21.5% | | | 78.5% | | |
| Maximum Green (s) | 16.0 | | | 79.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 16.0 | | | 79.0 | | |
| Actuated g/C Ratio | 0.15 | | | 0.74 | | |
| v/c Ratio | 1.06 | | | 0.32 | | |
| Control Delay | 101.6 | | | 5.1 | | |
| Queue Delay | 31.1 | | | 3.4 | | |
| Total Delay | 132.7 | | | 8.5 | | |
| LOS | F | | | A | | |
| Approach Delay | 132.7 | | | 8.5 | | |
| Approach LOS | F | | | A | | |
| Stops (vph) | 394 | | | 317 | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|-------|-----|-----|------|------|-----|
| Fuel Used(l) | 46 | | | 18 | | |
| CO Emissions (g/hr) | 860 | | | 329 | | |
| NOx Emissions (g/hr) | 166 | | | 63 | | |
| VOC Emissions (g/hr) | 198 | | | 76 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | ~65.6 | | | 27.5 | | |
| Queue Length 95th (m) | #94.4 | | | 31.8 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 496 | | | 3629 | | |
| Starvation Cap Reductn | 353 | | | 2324 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 3.68 | | | 0.90 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 107
 Actuated Cycle Length: 107
 Offset: 4 (4%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 46.9 Intersection LOS: D
 Intersection Capacity Utilization 119.9% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

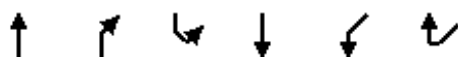
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

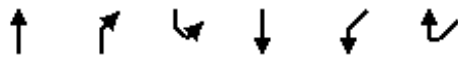


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↗ | |
| Volume (vph) | 0 | 0 | 0 | 2171 | 561 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2820 | 729 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2820 | 729 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 73.0 | 37.0 | |
| Total Split (%) | | | | 66.4% | 33.6% | |
| Maximum Green (s) | | | | 68.0 | 32.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 68.0 | 32.0 | |
| Actuated g/C Ratio | | | | 0.62 | 0.29 | |
| v/c Ratio | | | | 0.92 | 0.75 | |
| Control Delay | | | | 24.8 | 41.0 | |
| Queue Delay | | | | 46.1 | 0.0 | |
| Total Delay | | | | 70.9 | 41.0 | |
| LOS | | | | E | D | |
| Approach Delay | | | | 70.9 | 41.0 | |
| Approach LOS | | | | E | D | |

Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

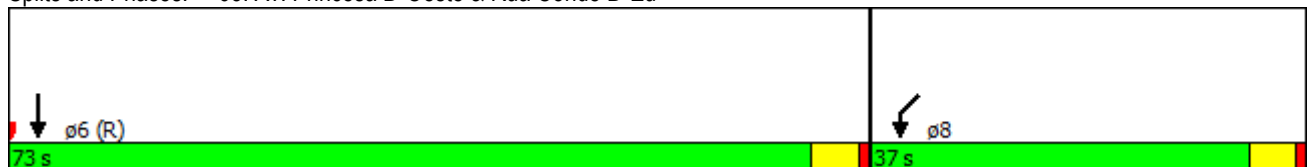


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|-------|------|-----|
| Stops (vph) | | | | 2017 | 562 | |
| Fuel Used(l) | | | | 101 | 35 | |
| CO Emissions (g/hr) | | | | 1885 | 642 | |
| NOx Emissions (g/hr) | | | | 364 | 124 | |
| VOC Emissions (g/hr) | | | | 435 | 148 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 191.5 | 76.8 | |
| Queue Length 95th (m) | | | | 202.5 | 94.7 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 3068 | 974 | |
| Starvation Cap Reductn | | | | 1205 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.51 | 0.75 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 2 (2%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.92 |
| Intersection Signal Delay: | 64.8 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 73.8% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

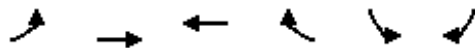
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 474 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 616 | 10 | 0 | 140 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 626 | 0 | 0 | 140 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 2557 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1482 | 0 | 0 | 0 | 0 | 3321 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1482 | 0 | 0 | 0 | 0 | 3321 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 55.0 | | | | | 34.0 |
| Total Split (%) | 61.8% | | | | | 38.2% |
| Maximum Green (s) | 51.0 | | | | | 28.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 51.0 | | | | | 28.0 |
| Actuated g/C Ratio | 0.57 | | | | | 0.31 |
| v/c Ratio | 0.75 | | | | | 3.00 |
| Control Delay | 17.2 | | | | | 917.9 |
| Queue Delay | 49.5 | | | | | 0.2 |
| Total Delay | 66.8 | | | | | 918.1 |
| LOS | E | | | | | F |
| Approach Delay | 66.8 | | | | | |

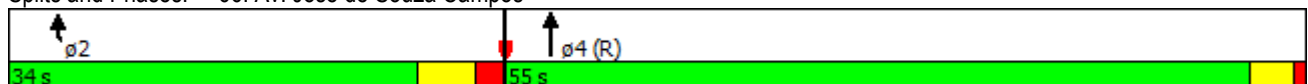


| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|-------|-----|-----|------|------|--------|
| Approach LOS | E | | | | | |
| Stops (vph) | 917 | | | | | 2255 |
| Fuel Used(l) | 43 | | | | | 2102 |
| CO Emissions (g/hr) | 794 | | | | | 39100 |
| NOx Emissions (g/hr) | 153 | | | | | 7547 |
| VOC Emissions (g/hr) | 183 | | | | | 9018 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 97.1 | | | | | ~458.6 |
| Queue Length 95th (m) | 116.8 | | | | | #474.1 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1979 | | | | | 1108 |
| Starvation Cap Reductn | 982 | | | | | 37 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.49 | | | | | 3.10 |

Intersection Summary

Area Type: Other
 Cycle Length: 89
 Actuated Cycle Length: 89
 Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 3.00
 Intersection Signal Delay: 655.4
 Intersection LOS: F
 Intersection Capacity Utilization 111.4%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Maciel

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1606 | 471 | 0 | 1756 | 0 | 171 | 750 | 86 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 3% | 2% | 1% | 1% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2086 | 612 | 0 | 2281 | 0 | 222 | 974 | 112 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2147 | 551 | 0 | 2281 | 0 | 0 | 1196 | 112 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 76.0 | 76.0 | | 81.0 | | 45.0 | 45.0 | 45.0 | | |
| Total Split (%) | | 60.3% | 60.3% | | 64.3% | | 35.7% | 35.7% | 35.7% | | |
| Maximum Green (s) | | 72.0 | 72.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 77.0 | 77.0 | | 76.0 | | | 40.0 | 40.0 | | |
| Actuated g/C Ratio | | 0.61 | 0.61 | | 0.60 | | | 0.32 | 0.32 | | |
| v/c Ratio | | 1.13 | 0.67 | | 0.80 | | | 1.15 | 0.23 | | |
| Control Delay | | 91.6 | 21.1 | | 7.0 | | | 117.3 | 33.4 | | |
| Queue Delay | | 0.2 | 0.0 | | 1.3 | | | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

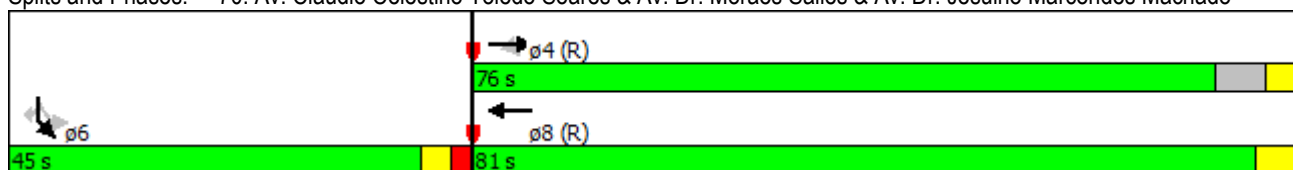


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|-------|-----|------|-----|------|--------|------|------|-----|
| Total Delay | | 91.8 | 21.1 | | 8.4 | | | 117.3 | 33.4 | | |
| LOS | | F | C | | A | | | F | C | | |
| Approach Delay | | 77.4 | | | 8.4 | | | 110.1 | | | |
| Approach LOS | | E | | | A | | | F | | | |
| Stops (vph) | | 1571 | 310 | | 520 | | | 886 | 70 | | |
| Fuel Used(l) | | 193 | 21 | | 33 | | | 120 | 5 | | |
| CO Emissions (g/hr) | | 3583 | 397 | | 622 | | | 2233 | 86 | | |
| NOx Emissions (g/hr) | | 691 | 77 | | 120 | | | 431 | 17 | | |
| VOC Emissions (g/hr) | | 826 | 91 | | 143 | | | 515 | 20 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~356.9 | 97.8 | | 31.5 | | | ~188.6 | 21.5 | | |
| Queue Length 95th (m) | | #379.2 | 135.1 | | 32.4 | | | #219.1 | 35.9 | | |
| Internal Link Dist (m) | | 121.0 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1898 | 825 | | 2848 | | | 1042 | 480 | | |
| Starvation Cap Reductn | | 0 | 0 | | 343 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 148 | 0 | | 0 | | | 6 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.23 | 0.67 | | 0.91 | | | 1.15 | 0.23 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 126
 Actuated Cycle Length: 126
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 130
 Control Type: Pretimed
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 59.2
 Intersection LOS: E
 Intersection Capacity Utilization 161.3%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 563 | 602 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.932 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 731 | 782 | 656 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 731 | 1438 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 66.0% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 204 | 471 | 34 | 198 | 426 | 16 | 14 | 44 | 24 | 15 | 73 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.956 | | | 0.929 | |
| Flt Protected | | 0.986 | | | 0.985 | | | 0.992 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 3118 | 0 | 0 | 3069 | 0 |
| Flt Permitted | | 0.986 | | | 0.985 | | | 0.864 | | | 0.916 | |
| Satd. Flow (perm) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 2716 | 0 | 0 | 2823 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 101.8 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 265 | 612 | 44 | 257 | 553 | 21 | 18 | 57 | 31 | 19 | 95 | 103 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 921 | 0 | 0 | 831 | 0 | 0 | 106 | 0 | 0 | 217 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 24.0 | 24.0 | | 26.0 | 26.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 38.1% | 38.1% | | 41.3% | 41.3% | | 20.6% | 20.6% | | 20.6% | 20.6% | |
| Maximum Green (s) | 18.0 | 18.0 | | 20.0 | 20.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 18.0 | | | 20.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.29 | | | 0.32 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 0.99 | | | 0.82 | | | 0.31 | | | 0.61 | |
| Control Delay | | 53.2 | | | 28.2 | | | 27.7 | | | 33.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 53.2 | | | 28.2 | | | 27.7 | | | 33.9 | |
| LOS | | D | | | C | | | C | | | C | |
| Approach Delay | | 53.2 | | | 28.2 | | | 27.7 | | | 33.9 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019

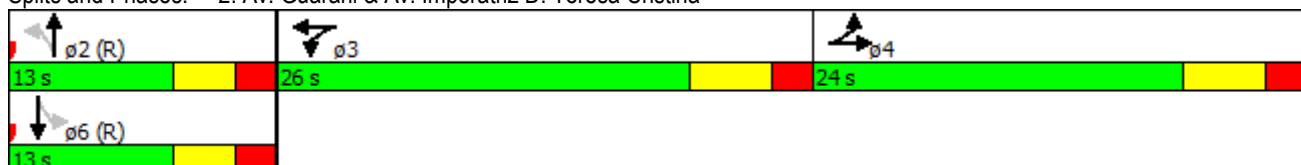


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-----|-------|-----|-----|-----|------|-----|-----|
| Approach LOS | | D | | | | C | | | | C | | |
| Stops (vph) | | 682 | | | | 617 | | | | 81 | | |
| Fuel Used(l) | | 62 | | | | 55 | | | | 5 | | |
| CO Emissions (g/hr) | | 1155 | | | | 1020 | | | | 84 | | |
| NOx Emissions (g/hr) | | 223 | | | | 197 | | | | 16 | | |
| VOC Emissions (g/hr) | | 266 | | | | 235 | | | | 19 | | |
| Dilemma Vehicles (#) | | 0 | | | | 0 | | | | 0 | | |
| Queue Length 50th (m) | | 58.7 | | | | 48.5 | | | | 6.3 | | |
| Queue Length 95th (m) | | #91.9 | | | | #67.7 | | | | 12.6 | | |
| Internal Link Dist (m) | | 77.9 | | | | 63.4 | | | | 62.2 | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 927 | | | | 1017 | | | | 344 | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | | | 0 | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | | | 0 | | |
| Storage Cap Reductn | | 0 | | | | 0 | | | | 0 | | |
| Reduced v/c Ratio | | 0.99 | | | | 0.82 | | | | 0.31 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 63
 Actuated Cycle Length: 63
 Offset: 24 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 39.9
 Intersection LOS: D
 Intersection Capacity Utilization 70.3%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|-------|-------|
| Lane Configurations | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1875 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | 0.991 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2435 | 160 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2595 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 47.4% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 423 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 1269 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.988 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 549 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 792 | 1648 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 598 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2440 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | 84.0 | 84.0 | |
| Total Split (%) | | 21.5% | | | | | | | | 78.5% | 78.5% | |
| Maximum Green (s) | | 16.0 | | | | | | | | 79.0 | 79.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 79.0 | |
| Actuated g/C Ratio | | 0.15 | | | | | | | | | 0.74 | |
| v/c Ratio | | 1.21 | | | | | | | | | 0.72 | |
| Control Delay | | 151.3 | | | | | | | | | 9.4 | |
| Queue Delay | | 0.0 | | | | | | | | | 47.4 | |
| Total Delay | | 151.3 | | | | | | | | | 56.8 | |
| LOS | | F | | | | | | | | | E | |
| Approach Delay | | 151.3 | | | | | | | | | 56.8 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Approach LOS | | F | | | | | | | | | | E |
| Stops (vph) | | 426 | | | | | | | | | | 1089 |
| Fuel Used(l) | | 73 | | | | | | | | | | 49 |
| CO Emissions (g/hr) | | 1358 | | | | | | | | | | 908 |
| NOx Emissions (g/hr) | | 262 | | | | | | | | | | 175 |
| VOC Emissions (g/hr) | | 313 | | | | | | | | | | 209 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | ~84.4 | | | | | | | | | | 93.4 |
| Queue Length 95th (m) | | #114.5 | | | | | | | | | | 101.1 |
| Internal Link Dist (m) | | 35.9 | | | 7.7 | | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 495 | | | | | | | | | | 3392 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 1411 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 1.21 | | | | | | | | | | 1.23 |

Intersection Summary

Area Type: Other

Cycle Length: 107

Actuated Cycle Length: 107

Offset: 58 (54%), Referenced to phase 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 1.21

Intersection Signal Delay: 75.4

Intersection LOS: E

Intersection Capacity Utilization 66.3%

ICU Level of Service C

Analysis Period (min) 15

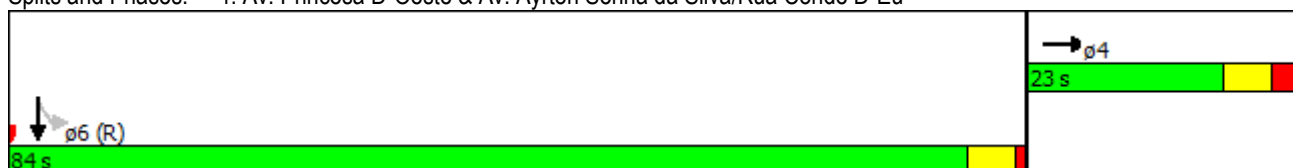
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1879 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.953 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 526 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2441 | 1108 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 526 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3549 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | | 77.0 | |
| Total Split (%) | | 23.0% | | | | | | | | | 77.0% | |
| Maximum Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Actuated g/C Ratio | | 0.16 | | | | | | | | | 0.72 | |
| v/c Ratio | | 0.99 | | | | | | | | | 1.05 | |
| Control Delay | | 79.9 | | | | | | | | | 44.5 | |
| Queue Delay | | 0.0 | | | | | | | | | 23.6 | |
| Total Delay | | 79.9 | | | | | | | | | 68.1 | |
| LOS | | E | | | | | | | | | E | |
| Approach Delay | | 79.9 | | | | | | | | | 68.1 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019

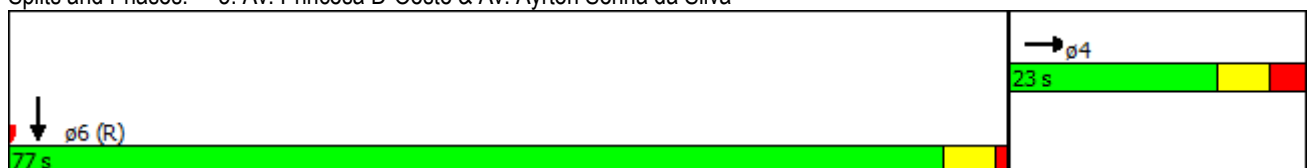


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-----|------|-----|------|-----|------|-----|--------|
| Approach LOS | | E | | | | | | | | | | E |
| Stops (vph) | | 404 | | | | | | | | | | 2533 |
| Fuel Used(l) | | 40 | | | | | | | | | | 183 |
| CO Emissions (g/hr) | | 750 | | | | | | | | | | 3397 |
| NOx Emissions (g/hr) | | 145 | | | | | | | | | | 656 |
| VOC Emissions (g/hr) | | 173 | | | | | | | | | | 783 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 57.0 | | | | | | | | | | ~289.4 |
| Queue Length 95th (m) | | #87.3 | | | | | | | | | | #297.2 |
| Internal Link Dist (m) | | 47.4 | | | | 12.6 | | 21.2 | | 44.4 | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 531 | | | | | | | | | | 3396 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 615 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.99 | | | | | | | | | | 1.28 |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 58 (58%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 120 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 69.6 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 85.2% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



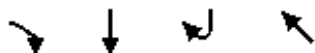
Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 1868 | 7 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1542 | 4960 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1542 | 4960 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 394 | 2426 | 9 | 492 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 394 | 2435 | 0 | 492 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 65.0 | | 37.0 |
| Total Split (%) | | 63.7% | | 36.3% |
| Maximum Green (s) | | 60.0 | | 32.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 102.0 | 60.0 | | 32.0 |
| Actuated g/C Ratio | 1.00 | 0.59 | | 0.31 |
| v/c Ratio | 0.26 | 0.83 | | 0.46 |
| Control Delay | 0.4 | 20.3 | | 29.8 |
| Queue Delay | 0.0 | 0.0 | | 0.0 |
| Total Delay | 0.4 | 20.3 | | 29.8 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | C | | C |
| Approach Delay | | 20.3 | | 29.8 |
| Approach LOS | | C | | C |
| Stops (vph) | 0 | 1632 | | 333 |
| Fuel Used(l) | 1 | 96 | | 19 |
| CO Emissions (g/hr) | 24 | 1794 | | 345 |
| NOx Emissions (g/hr) | 5 | 346 | | 67 |
| VOC Emissions (g/hr) | 6 | 414 | | 80 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 140.4 | | 43.1 |
| Queue Length 95th (m) | 0.0 | 152.5 | | 56.4 |
| Internal Link Dist (m) | | 108.8 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1542 | 2917 | | 1062 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.26 | 0.83 | | 0.46 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 102 |
| Actuated Cycle Length: | 102 |
| Offset: | 58 (57%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.83 |
| Intersection Signal Delay: | 19.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 61.1% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

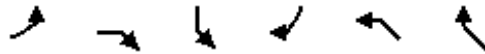
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations | ↖ ↗ | | | | ↖ ↗ | | |
| Volume (vph) | 1644 | 0 | 0 | 0 | 0 | 1884 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 2135 | 0 | 0 | 0 | 0 | 2447 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2135 | 0 | 0 | 0 | 0 | 2447 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | Prot | | | Prot | | | |
| Protected Phases | 4 | | | 2 | | | 8 |
| Permitted Phases | | | | 2 | | | |
| Minimum Split (s) | 22.0 | | | 22.0 | | | 22.0 |
| Total Split (s) | 65.0 | | | 43.0 | | | 65.0 |
| Total Split (%) | 60.2% | | | 39.8% | | | 60% |
| Maximum Green (s) | 59.0 | | | 37.0 | | | 59.0 |
| Yellow Time (s) | 4.0 | | | 4.0 | | | 4.0 |
| All-Red Time (s) | 2.0 | | | 2.0 | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | 6.0 | | | 6.0 | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | | 0 |
| Act Effct Green (s) | 59.0 | | | 37.0 | | | |
| Actuated g/C Ratio | 0.55 | | | 0.34 | | | |
| v/c Ratio | 1.17 | | | 2.07 | | | |
| Control Delay | 106.7 | | | 507.0 | | | |
| Queue Delay | 0.0 | | | 0.0 | | | |
| Total Delay | 106.7 | | | 507.0 | | | |
| LOS | F | | | F | | | |
| Approach Delay | 106.7 | | | | | | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019

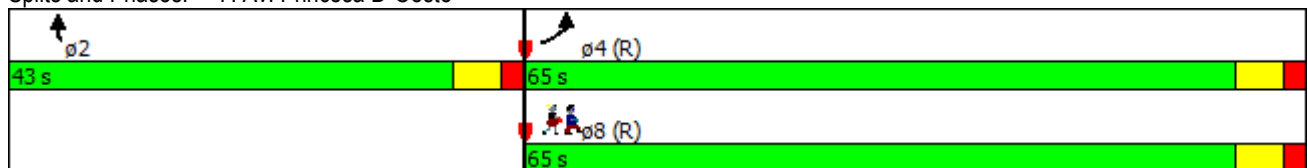


| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|------------------------|--------|-----|------|--------|-------|-----|----|
| Approach LOS | F | | | | | | |
| Stops (vph) | 1548 | | | 1425 | | | |
| Fuel Used(l) | 191 | | | 953 | | | |
| CO Emissions (g/hr) | 3559 | | | 17730 | | | |
| NOx Emissions (g/hr) | 687 | | | 3422 | | | |
| VOC Emissions (g/hr) | 821 | | | 4089 | | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | | |
| Queue Length 50th (m) | ~290.7 | | | ~376.3 | | | |
| Queue Length 95th (m) | #315.5 | | | #394.7 | | | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 1830 | | | 1183 | | | |
| Starvation Cap Reductn | 0 | | | 0 | | | |
| Spillback Cap Reductn | 0 | | | 0 | | | |
| Storage Cap Reductn | 0 | | | 0 | | | |
| Reduced v/c Ratio | 1.17 | | | 2.07 | | | |

Intersection Summary

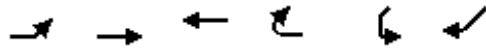
Area Type: Other
 Cycle Length: 108
 Actuated Cycle Length: 108
 Offset: 0 (0%), Referenced to phase 4:EBL and 8:Ped, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 2.07
 Intersection Signal Delay: 320.5 Intersection LOS: F
 Intersection Capacity Utilization 112.6% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 405 | 461 | 0 | 0 | 0 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 526 | 599 | 0 | 0 | 0 | 1108 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 526 | 599 | 0 | 0 | 0 | 1108 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.1% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 159 | 241 | 15 | 112 | 304 | 38 | 11 | 166 | 163 | 15 | 284 | 362 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | 0.989 | | | 0.935 | | | 0.926 | |
| Flt Protected | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Flt Permitted | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 125.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 9.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 207 | 313 | 19 | 145 | 395 | 49 | 14 | 216 | 212 | 19 | 369 | 470 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 539 | 0 | 0 | 589 | 0 | 0 | 442 | 0 | 0 | 858 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 97.0% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 581 | 769 | 647 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.865 | 0.936 | |
| Flt Protected | | | | | 0.972 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1816 | 3228 | 0 |
| Flt Permitted | | | | | 0.972 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1816 | 3228 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Confl. Peds. (#/hr) | | | | | 452 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 668 | 999 | 744 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 668 | 1743 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑ | | ↑↑↑ |
| Volume (vph) | 323 | 2802 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Fr _t | | 0.996 | | |
| Fl _t Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4846 | 0 | 4716 |
| Fl _t Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4846 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 420 | 3639 | 90 | 1482 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 420 | 3729 | 0 | 1482 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 55.0 | 50.0 | | 49.0 |
| Total Split (%) | 52.4% | 47.6% | | 46.7% |
| Maximum Green (s) | 51.0 | 44.0 | | 44.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 51.0 | 44.0 | | 50.0 |
| Actuated g/C Ratio | 0.49 | 0.42 | | 0.48 |
| v/c Ratio | 0.26 | 1.84 | | 0.66 |
| Control Delay | 16.4 | 402.5 | | 22.8 |
| Queue Delay | 60.3 | 0.0 | | 49.7 |
| Total Delay | 76.8 | 402.5 | | 72.5 |
| LOS | E | F | | E |
| Approach Delay | | 402.5 | | 72.5 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

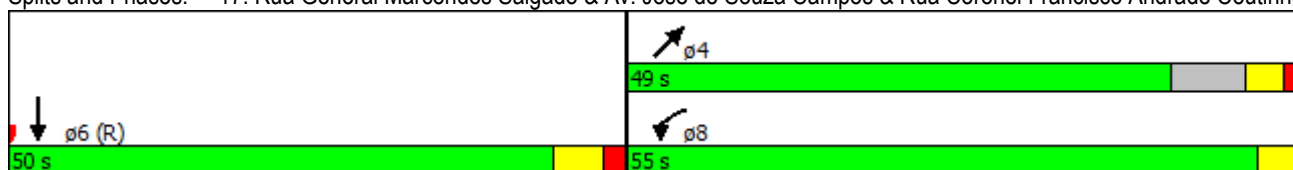


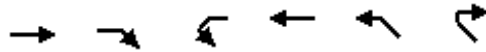
| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|--------|------|------|
| Approach LOS | | F | | E |
| Stops (vph) | 205 | 2222 | | 943 |
| Fuel Used(l) | 10 | 1118 | | 51 |
| CO Emissions (g/hr) | 192 | 20787 | | 957 |
| NOx Emissions (g/hr) | 37 | 4012 | | 185 |
| VOC Emissions (g/hr) | 44 | 4794 | | 221 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 26.4 | ~446.4 | | 86.3 |
| Queue Length 95th (m) | 35.2 | #450.8 | | 97.6 |
| Internal Link Dist (m) | | 180.5 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1627 | 2030 | | 2245 |
| Starvation Cap Reductn | 1341 | 0 | | 1219 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.47 | 1.84 | | 1.44 |

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.84
 Intersection Signal Delay: 291.3
 Intersection LOS: F
 Intersection Capacity Utilization 110.7%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho





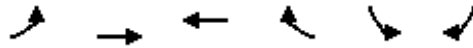
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 951 | 442 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.948 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3243 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3243 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 1093 | 574 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1667 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.88 | 0.88 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.6% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 96 | 394 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 96 | 394 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 386 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 501 | 96 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 501 | 96 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 105 | 928 | 0 | 0 | 0 | 0 | 0 | 799 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frts | | | | | | | | 0.973 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 136 | 1205 | 0 | 0 | 0 | 0 | 0 | 1038 | 232 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1341 | 0 | 0 | 0 | 0 | 0 | 1270 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 23.0 | 23.0 | | | | | | 30.0 | | | | |
| Total Split (%) | 43.4% | 43.4% | | | | | | 56.6% | | | | |
| Maximum Green (s) | 16.0 | 16.0 | | | | | | 25.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 16.0 | | | | | | 25.0 | | | | |
| Actuated g/C Ratio | | 0.30 | | | | | | 0.47 | | | | |
| v/c Ratio | | 1.31 | | | | | | 0.59 | | | | |
| Control Delay | | 166.6 | | | | | | 11.6 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 166.6 | | | | | | 11.6 | | | | |
| LOS | | F | | | | | | B | | | | |
| Approach Delay | | 166.6 | | | | | | 11.6 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

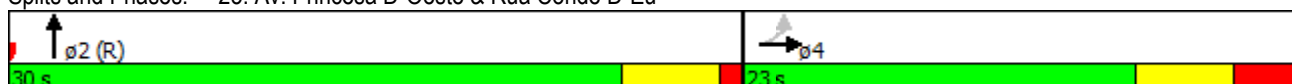


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|--------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | F | | | | | | B | | | | |
| Stops (vph) | | 956 | | | | | | 739 | | | | |
| Fuel Used(l) | | 175 | | | | | | 29 | | | | |
| CO Emissions (g/hr) | | 3246 | | | | | | 545 | | | | |
| NOx Emissions (g/hr) | | 627 | | | | | | 105 | | | | |
| VOC Emissions (g/hr) | | 749 | | | | | | 126 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | 0 | | | | |
| Queue Length 50th (m) | | ~94.8 | | | | | | 31.4 | | | | |
| Queue Length 95th (m) | | #124.4 | | | | | | 40.9 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1027 | | | | | | 2168 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 1.31 | | | | | | 0.59 | | | | |

Intersection Summary

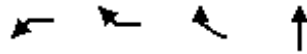
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 53 |
| Actuated Cycle Length: | 53 |
| Offset: | 0 (0%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.31 |
| Intersection Signal Delay: | 91.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 64.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

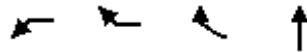


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 561 | 379 | 225 | 1309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.956 | 0.850 | | |
| Flt Protected | 0.966 | | | |
| Satd. Flow (prot) | 3239 | 1371 | 0 | 4964 |
| Flt Permitted | 0.966 | | | |
| Satd. Flow (perm) | 3239 | 1371 | 0 | 4964 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 729 | 492 | 292 | 1700 |
| Shared Lane Traffic (%) | | 62% | | |
| Lane Group Flow (vph) | 1034 | 479 | 0 | 1700 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 30.0 | 30.0 | | 73.0 |
| Total Split (%) | 29.1% | 29.1% | | 70.9% |
| Maximum Green (s) | 25.0 | 25.0 | | 68.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 25.0 | 25.0 | | 68.0 |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.66 |
| v/c Ratio | 1.32 | 1.44 | | 0.52 |
| Control Delay | 184.4 | 247.1 | | 9.7 |
| Queue Delay | 0.0 | 0.0 | | 48.4 |
| Total Delay | 184.4 | 247.1 | | 58.2 |
| LOS | F | F | | E |
| Approach Delay | 204.3 | | | 58.2 |

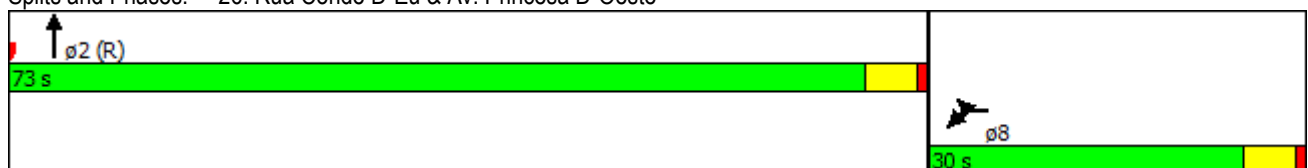


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|--------|--------|------|------|
| Approach LOS | F | | | E |
| Stops (vph) | 720 | 313 | | 709 |
| Fuel Used(l) | 153 | 91 | | 37 |
| CO Emissions (g/hr) | 2848 | 1685 | | 681 |
| NOx Emissions (g/hr) | 550 | 325 | | 131 |
| VOC Emissions (g/hr) | 657 | 389 | | 157 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | ~145.4 | ~151.2 | | 61.0 |
| Queue Length 95th (m) | #176.7 | #210.7 | | 68.3 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 786 | 332 | | 3277 |
| Starvation Cap Reductn | 0 | 0 | | 1751 |
| Spillback Cap Reductn | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.32 | 1.44 | | 1.11 |

Intersection Summary

Area Type: Other
 Cycle Length: 103
 Actuated Cycle Length: 103
 Offset: 2 (2%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed
 Maximum v/c Ratio: 1.44
 Intersection Signal Delay: 127.0
 Intersection LOS: F
 Intersection Capacity Utilization 65.9%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↶↶ | ↷↷↷ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1644 | 1998 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2135 | 2595 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2135 | 2595 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 98.0 | 98.0 | 8.0 |
| Total Split (%) | | | | | 92.5% | 92.5% | 8% |
| Maximum Green (s) | | | | | 92.0 | 92.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 92.0 | 92.0 | |
| Actuated g/C Ratio | | | | | 0.87 | 0.87 | |
| v/c Ratio | | | | | 0.75 | 0.61 | |
| Control Delay | | | | | 4.7 | 2.7 | |
| Queue Delay | | | | | 14.4 | 4.6 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 19.0 | 7.3 | |
| LOS | | | | | B | A | |
| Approach Delay | | | | | | 12.6 | |
| Approach LOS | | | | | | B | |
| Stops (vph) | | | | | 596 | 520 | |
| Fuel Used(l) | | | | | 35 | 34 | |
| CO Emissions (g/hr) | | | | | 643 | 632 | |
| NOx Emissions (g/hr) | | | | | 124 | 122 | |
| VOC Emissions (g/hr) | | | | | 148 | 146 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 56.3 | 36.4 | |
| Queue Length 95th (m) | | | | | 65.1 | 39.1 | |
| Internal Link Dist (m) | 0.1 | | 259.4 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2850 | 4222 | |
| Starvation Cap Reductn | | | | | 748 | 1547 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 1.02 | 0.97 | |

Intersection Summary

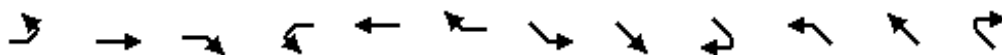
| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 106 |
| Actuated Cycle Length: | 106 |
| Offset: | 5 (5%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.75 |
| Intersection Signal Delay: | 12.6 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 64.5% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

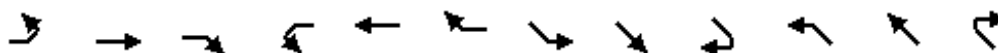
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 2121 | 0 | 0 | 1612 | 214 | 0 | 0 | 0 | 299 | 557 | 102 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.982 | | | | | | 0.997 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1723 | 1483 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1723 | 1483 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 100% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 100% | 100% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 1% | 0% |
| Adj. Flow (vph) | 0 | 2438 | 0 | 0 | 2094 | 278 | 0 | 0 | 0 | 344 | 640 | 132 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 10% |
| Lane Group Flow (vph) | 0 | 2438 | 0 | 0 | 2372 | 0 | 0 | 0 | 0 | 344 | 653 | 119 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | | 81.0 | | | 76.0 | | | | | 45.0 | 45.0 | 45.0 |
| Total Split (%) | | 64.3% | | | 60.3% | | | | | 35.7% | 35.7% | 35.7% |
| Maximum Green (s) | | 76.0 | | | 72.0 | | | | | 40.0 | 40.0 | 40.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 76.0 | | | 77.0 | | | | | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | | 0.60 | | | 0.61 | | | | | 0.32 | 0.32 | 0.32 |
| v/c Ratio | | 0.86 | | | 0.84 | | | | | 0.62 | 1.20 | 0.25 |
| Control Delay | | 6.1 | | | 23.2 | | | | | 42.5 | 143.3 | 33.8 |
| Queue Delay | | 46.8 | | | 0.3 | | | | | 66.9 | 7.7 | 79.2 |
| Total Delay | | 52.8 | | | 23.6 | | | | | 109.4 | 151.0 | 113.0 |
| LOS | | D | | | C | | | | | F | F | F |
| Approach Delay | | 52.8 | | | 23.6 | | | | | | 134.1 | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|-------|-----|-----|------|-----|-------|--------|------|
| Approach LOS | | D | | | C | | | | | | | F |
| Stops (vph) | | 885 | | | 1588 | | | | | 252 | 465 | 75 |
| Fuel Used(l) | | 42 | | | 111 | | | | | 17 | 75 | 5 |
| CO Emissions (g/hr) | | 773 | | | 2069 | | | | | 309 | 1401 | 89 |
| NOx Emissions (g/hr) | | 149 | | | 399 | | | | | 60 | 270 | 17 |
| VOC Emissions (g/hr) | | 178 | | | 477 | | | | | 71 | 323 | 21 |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Queue Length 50th (m) | | 35.3 | | | 170.9 | | | | | 76.2 | ~216.7 | 24.2 |
| Queue Length 95th (m) | | m26.7 | | | 180.9 | | | | | 104.9 | #280.1 | 40.0 |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 35.4 | | | 17.9 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2848 | | | 2819 | | | | | 553 | 546 | 470 |
| Starvation Cap Reductn | | 904 | | | 0 | | | | | 387 | 287 | 373 |
| Spillback Cap Reductn | | 0 | | | 106 | | | | | 322 | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Reduced v/c Ratio | | 1.25 | | | 0.87 | | | | | 2.07 | 2.52 | 1.23 |

Intersection Summary

Area Type: Other

Cycle Length: 126

Actuated Cycle Length: 126

Offset: 2 (2%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.20

Intersection Signal Delay: 56.4

Intersection LOS: E

Intersection Capacity Utilization 172.8%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

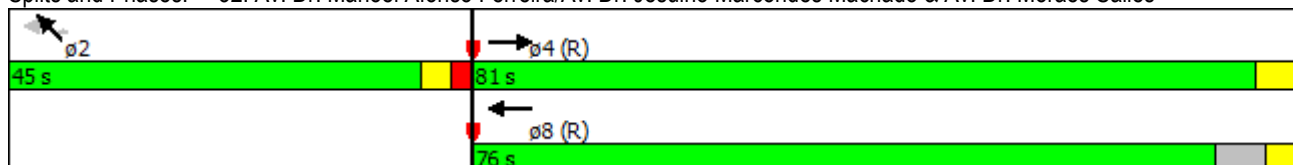
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

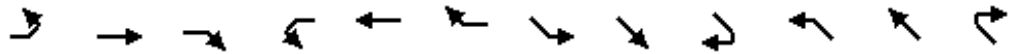
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

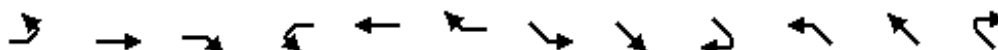


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↔↑ | | | | | | | | | ↑↔ | |
| Volume (vph) | 618 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.978 | |
| Flt Protected | | 0.963 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3327 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Flt Permitted | | 0.963 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3327 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 710 | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 | 69 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 481 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | | 2 |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | | 21.0 |
| Total Split (s) | 106.0 | 106.0 | | | | | | | | | | 22.0 |
| Total Split (%) | 82.8% | 82.8% | | | | | | | | | | 17.2% |
| Maximum Green (s) | 102.0 | 102.0 | | | | | | | | | | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | 0.0 |
| Total Lost Time (s) | | 4.0 | | | | | | | | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | | 0 |
| Act Effct Green (s) | | 102.0 | | | | | | | | | | 17.0 |
| Actuated g/C Ratio | | 0.80 | | | | | | | | | | 0.13 |
| v/c Ratio | | 0.35 | | | | | | | | | | 1.11 |
| Control Delay | | 4.1 | | | | | | | | | | 125.5 |
| Queue Delay | | 0.0 | | | | | | | | | | 0.0 |
| Total Delay | | 4.1 | | | | | | | | | | 125.5 |
| LOS | | A | | | | | | | | | | F |
| Approach Delay | | 4.1 | | | | | | | | | | 125.5 |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

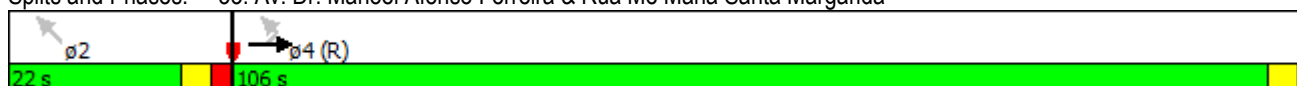


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|--------|
| Approach LOS | | A | | | | | | | | | | F |
| Stops (vph) | | 207 | | | | | | | | | | 357 |
| Fuel Used(l) | | 9 | | | | | | | | | | 52 |
| CO Emissions (g/hr) | | 171 | | | | | | | | | | 958 |
| NOx Emissions (g/hr) | | 33 | | | | | | | | | | 185 |
| VOC Emissions (g/hr) | | 39 | | | | | | | | | | 221 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 30.4 | | | | | | | | | | ~76.3 |
| Queue Length 95th (m) | | 35.7 | | | | | | | | | | #106.5 |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | | 17.9 | | | | 55.5 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2651 | | | | | | | | | | 435 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 0 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.35 | | | | | | | | | | 1.11 |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 128 |
| Actuated Cycle Length: | 128 |
| Offset: | 44 (34%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.11 |
| Intersection Signal Delay: | 45.3 |
| Intersection LOS: | D |
| Intersection Capacity Utilization: | 53.5% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |
| ~ | Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. |
| # | 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. |

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1274 | 0 | 799 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 129.4 | 59.4 | |
| Travel Time (s) | 4.6 | | | 9.3 | 4.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1464 | 0 | 918 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1464 | 0 | 918 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

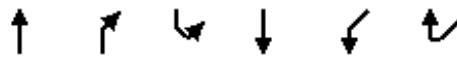
Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

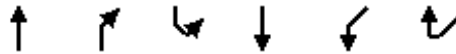


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 2298 | 1230 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2985 | 1598 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4583 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 98.0 | | | | | | 8.0 |
| Total Split (%) | 92.5% | | | | | | 8% |
| Maximum Green (s) | 92.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 92.0 | | | | | | |
| Actuated g/C Ratio | 0.87 | | | | | | |
| v/c Ratio | 1.19dr | | | | | | |
| Control Delay | 77.3 | | | | | | |
| Queue Delay | 0.0 | | | | | | |
| Total Delay | 77.3 | | | | | | |
| LOS | E | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

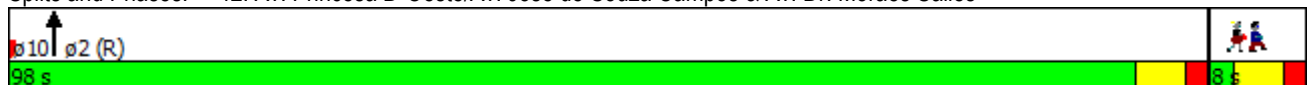


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|--------|-----|-----|------|------|-----|-----|
| Approach Delay | 77.3 | | | | | | |
| Approach LOS | E | | | | | | |
| Stops (vph) | 2891 | | | | | | |
| Fuel Used(l) | 327 | | | | | | |
| CO Emissions (g/hr) | 6087 | | | | | | |
| NOx Emissions (g/hr) | 1175 | | | | | | |
| VOC Emissions (g/hr) | 1404 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | ~426.7 | | | | | | |
| Queue Length 95th (m) | #421.5 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 39.4 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 4028 | | | | | | |
| Starvation Cap Reductn | 29 | | | | | | |
| Spillback Cap Reductn | 0 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.15 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 106
 Actuated Cycle Length: 106
 Offset: 92 (87%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 77.3
 Intersection LOS: E
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 323 | 259 | 0 | 2298 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.970 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 420 | 336 | 0 | 2985 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 31% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 524 | 232 | 0 | 2985 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 15.0 | 15.0 | 34.0 | 34.0 | | | | |
| Total Split (%) | | | | | 30.6% | 30.6% | 69.4% | 69.4% | | | | |
| Maximum Green (s) | | | | | 10.0 | 10.0 | 28.0 | 28.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 10.0 | 10.0 | | 28.0 | | | | |
| Actuated g/C Ratio | | | | | 0.20 | 0.20 | | 0.57 | | | | |
| v/c Ratio | | | | | 0.81 | 0.82 | | 1.07 | | | | |
| Control Delay | | | | | 31.7 | 45.7 | | 54.8 | | | | |
| Queue Delay | | | | | 0.0 | 0.0 | | 11.8 | | | | |
| Total Delay | | | | | 31.7 | 45.7 | | 66.7 | | | | |
| LOS | | | | | C | D | | E | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

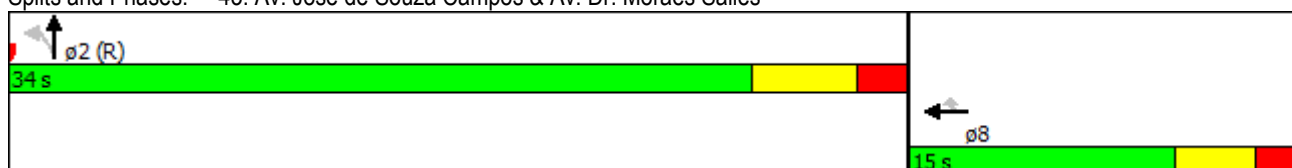


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|-------|-------|-----|--------|-----|-----|------|-----|
| Approach Delay | | | | | 36.0 | | | 66.7 | | | | |
| Approach LOS | | | | | D | | | E | | | | |
| Stops (vph) | | | | | 389 | 165 | | 2057 | | | | |
| Fuel Used(l) | | | | | 23 | 12 | | 171 | | | | |
| CO Emissions (g/hr) | | | | | 425 | 226 | | 3187 | | | | |
| NOx Emissions (g/hr) | | | | | 82 | 44 | | 615 | | | | |
| VOC Emissions (g/hr) | | | | | 98 | 52 | | 735 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 25.3 | 22.5 | | ~116.9 | | | | |
| Queue Length 95th (m) | | | | | #45.7 | #54.2 | | #137.6 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 643 | 284 | | 2780 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 655 | | | | |
| Spillback Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.81 | 0.82 | | 1.40 | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 49
 Actuated Cycle Length: 49
 Offset: 5 (10%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 60.5
 Intersection LOS: E
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|--------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 732 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.936 | |
| Flt Protected | 0.950 | 0.999 | 0.950 | | |
| Satd. Flow (prot) | 1572 | 3306 | 1641 | 4396 | 0 |
| Flt Permitted | 0.950 | 0.999 | 0.950 | | |
| Satd. Flow (perm) | 1572 | 3306 | 1641 | 4396 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 218.5 | |
| Travel Time (s) | | 2.4 | | 15.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 187 | 614 | 866 | 1295 | 951 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 168 | 633 | 866 | 2246 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 31.0 | 31.0 | 109.0 | 109.0 | |
| Total Split (%) | 22.1% | 22.1% | 77.9% | 77.9% | |
| Maximum Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 27.0 | 27.0 | 105.0 | 105.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.75 | 0.75 | |
| v/c Ratio | 0.55 | 0.99 | 0.70 | 0.87dr | |
| Control Delay | 59.0 | 90.1 | 13.2 | 10.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | |

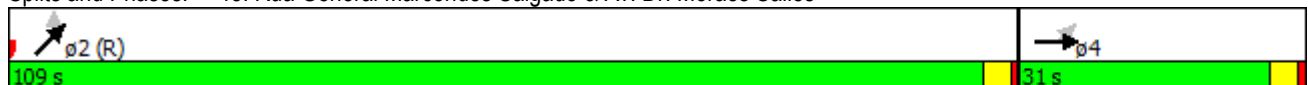


| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|--------|-------|-------|-----|
| Total Delay | 59.0 | 90.1 | 13.2 | 10.3 | |
| LOS | E | F | B | B | |
| Approach Delay | | 83.6 | | 11.1 | |
| Approach LOS | | F | | B | |
| Stops (vph) | 131 | 497 | 388 | 934 | |
| Fuel Used(l) | 10 | 51 | 32 | 77 | |
| CO Emissions (g/hr) | 186 | 950 | 595 | 1431 | |
| NOx Emissions (g/hr) | 36 | 183 | 115 | 276 | |
| VOC Emissions (g/hr) | 43 | 219 | 137 | 330 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 49.2 | 102.3 | 118.5 | 108.4 | |
| Queue Length 95th (m) | 73.9 | #137.6 | 152.0 | 113.8 | |
| Internal Link Dist (m) | | 9.3 | | 194.5 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 303 | 637 | 1230 | 3297 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.55 | 0.99 | 0.70 | 0.68 | |

Intersection Summary

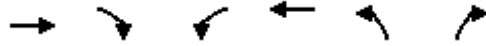
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 5 (4%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 25.9 Intersection LOS: C
 Intersection Capacity Utilization 63.2% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019
















| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1164 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.995 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1512 | 53 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1565 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.8% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

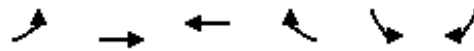
Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade

| |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
| Lane Configurations | | | | |  |  |  | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.850 | | | | |
| Flt Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 9 | 81 | 866 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 9 | 81 | 866 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |
| Intersection Summary | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | |
| Control Type: | Unsignalized | | | | | | | | | |
| Intersection Capacity Utilization | 43.2% | | | | | ICU Level of Service A | | | | |
| Analysis Period (min) | 15 | | | | | | | | | |

Lanes, Volumes, Timings
 53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 792 | 0 | 0 | 9 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 792 | 0 | 0 | 9 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.2% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1164 | 0 | 0 | 2478 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr _t | | 0.850 | | | 0.969 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1512 | 0 | 0 | 3219 | 840 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1512 | 0 | 0 | 4059 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 55.0 | | | 57.0 | | | |
| Total Split (%) | | 49.1% | | | 50.9% | | | |
| Maximum Green (s) | | 51.0 | | | 53.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 51.0 | | | 53.0 | | | |
| Actuated g/C Ratio | | 0.46 | | | 0.47 | | | |
| v/c Ratio | | 0.95 | | | 1.82 | | | |
| Control Delay | | 43.6 | | | 392.8 | | | |
| Queue Delay | | 0.0 | | | 0.2 | | | |
| Total Delay | | 43.6 | | | 393.0 | | | |
| LOS | | D | | | F | | | |
| Approach Delay | | | | | 393.0 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019

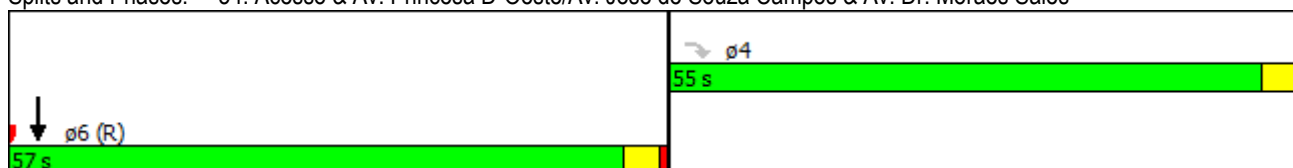


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|--------|-----|------|--------|-----|------|-----|
| Approach LOS | | | | | F | | | |
| Stops (vph) | | 1156 | | | 2385 | | | |
| Fuel Used(l) | | 75 | | | 1140 | | | |
| CO Emissions (g/hr) | | 1396 | | | 21213 | | | |
| NOx Emissions (g/hr) | | 269 | | | 4094 | | | |
| VOC Emissions (g/hr) | | 322 | | | 4893 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | 143.1 | | | ~517.3 | | | |
| Queue Length 95th (m) | | #176.1 | | | #515.4 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1589 | | | 2235 | | | |
| Starvation Cap Reductn | | 0 | | | 200 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 0.95 | | | 1.99 | | | |

Intersection Summary

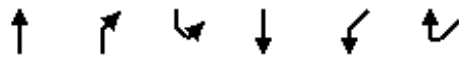
Area Type: Other
 Cycle Length: 112
 Actuated Cycle Length: 112
 Offset: 5 (4%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.82
 Intersection Signal Delay: 298.2
 Intersection LOS: F
 Intersection Capacity Utilization 107.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019



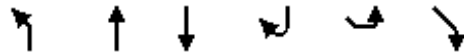
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Frt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Frt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 53 | 840 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 53 | 840 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 50.5% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 978 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Frt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Frt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 184.1 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.3 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 1270 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1338 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.7% ICU Level of Service B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1307 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 141.1 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.2 | | | 1.6 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 0 | 0 | 0 | 0 | 1698 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 68 | 0 | 0 | 0 | 0 | 1698 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.7% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↗ | | | ↑↑↑ | | |
| Volume (vph) | 405 | 0 | 0 | 904 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 526 | 0 | 0 | 1174 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 526 | 0 | 0 | 1174 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 23.0 | | | 84.0 | | |
| Total Split (%) | 21.5% | | | 78.5% | | |
| Maximum Green (s) | 16.0 | | | 79.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 16.0 | | | 79.0 | | |
| Actuated g/C Ratio | 0.15 | | | 0.74 | | |
| v/c Ratio | 1.06 | | | 0.32 | | |
| Control Delay | 101.6 | | | 5.1 | | |
| Queue Delay | 31.1 | | | 3.4 | | |
| Total Delay | 132.7 | | | 8.5 | | |
| LOS | F | | | A | | |
| Approach Delay | 132.7 | | | 8.5 | | |
| Approach LOS | F | | | A | | |
| Stops (vph) | 394 | | | 317 | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|-------|-----|-----|------|------|-----|
| Fuel Used(l) | 46 | | | 18 | | |
| CO Emissions (g/hr) | 860 | | | 329 | | |
| NOx Emissions (g/hr) | 166 | | | 63 | | |
| VOC Emissions (g/hr) | 198 | | | 76 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | ~65.6 | | | 27.5 | | |
| Queue Length 95th (m) | #94.4 | | | 31.8 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 496 | | | 3629 | | |
| Starvation Cap Reductn | 353 | | | 2324 | | |
| Spillback Cap Reductn | 0 | | | 0 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 3.68 | | | 0.90 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 107
 Actuated Cycle Length: 107
 Offset: 4 (4%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 46.9
 Intersection LOS: D
 Intersection Capacity Utilization 119.9%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

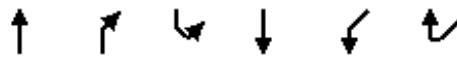
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

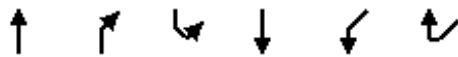


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↗ | |
| Volume (vph) | 0 | 0 | 0 | 2171 | 561 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2820 | 729 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2820 | 729 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 73.0 | 37.0 | |
| Total Split (%) | | | | 66.4% | 33.6% | |
| Maximum Green (s) | | | | 68.0 | 32.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 68.0 | 32.0 | |
| Actuated g/C Ratio | | | | 0.62 | 0.29 | |
| v/c Ratio | | | | 0.92 | 0.75 | |
| Control Delay | | | | 24.8 | 41.0 | |
| Queue Delay | | | | 46.1 | 0.0 | |
| Total Delay | | | | 70.9 | 41.0 | |
| LOS | | | | E | D | |
| Approach Delay | | | | 70.9 | 41.0 | |
| Approach LOS | | | | E | D | |

Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

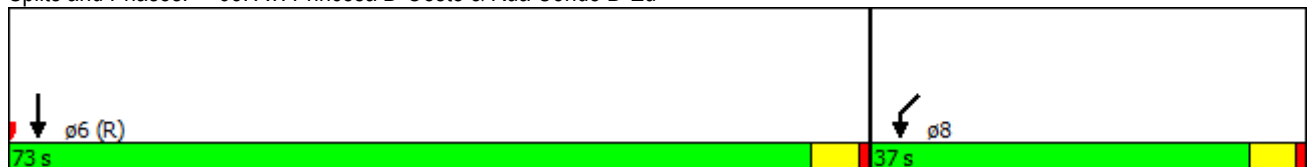


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|-------|------|-----|
| Stops (vph) | | | | 2017 | 562 | |
| Fuel Used(l) | | | | 101 | 35 | |
| CO Emissions (g/hr) | | | | 1885 | 642 | |
| NOx Emissions (g/hr) | | | | 364 | 124 | |
| VOC Emissions (g/hr) | | | | 435 | 148 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 191.5 | 76.8 | |
| Queue Length 95th (m) | | | | 202.5 | 94.7 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 3068 | 974 | |
| Starvation Cap Reductn | | | | 1205 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 1.51 | 0.75 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 110 |
| Actuated Cycle Length: | 110 |
| Offset: | 2 (2%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.92 |
| Intersection Signal Delay: | 64.8 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 73.8% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

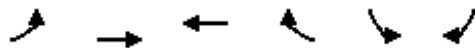
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 474 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 616 | 10 | 0 | 140 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 626 | 0 | 0 | 140 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 2557 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1482 | 0 | 0 | 0 | 0 | 3321 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1482 | 0 | 0 | 0 | 0 | 3321 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 55.0 | | | | | 34.0 |
| Total Split (%) | 61.8% | | | | | 38.2% |
| Maximum Green (s) | 51.0 | | | | | 28.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 51.0 | | | | | 28.0 |
| Actuated g/C Ratio | 0.57 | | | | | 0.31 |
| v/c Ratio | 0.75 | | | | | 3.00 |
| Control Delay | 17.2 | | | | | 917.9 |
| Queue Delay | 49.5 | | | | | 0.2 |
| Total Delay | 66.8 | | | | | 918.1 |
| LOS | E | | | | | F |
| Approach Delay | 66.8 | | | | | |

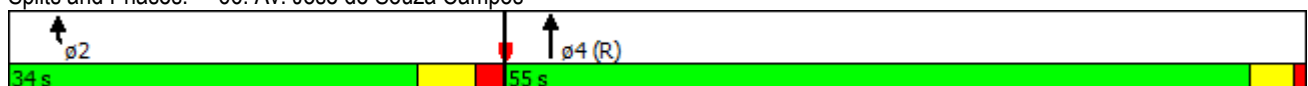


| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|-------|-----|-----|------|------|--------|
| Approach LOS | E | | | | | |
| Stops (vph) | 917 | | | | | 2255 |
| Fuel Used(l) | 43 | | | | | 2102 |
| CO Emissions (g/hr) | 794 | | | | | 39100 |
| NOx Emissions (g/hr) | 153 | | | | | 7547 |
| VOC Emissions (g/hr) | 183 | | | | | 9018 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | 97.1 | | | | | ~458.6 |
| Queue Length 95th (m) | 116.8 | | | | | #474.1 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1979 | | | | | 1108 |
| Starvation Cap Reductn | 982 | | | | | 37 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.49 | | | | | 3.10 |

Intersection Summary

Area Type: Other
 Cycle Length: 89
 Actuated Cycle Length: 89
 Offset: 5 (6%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 3.00
 Intersection Signal Delay: 655.4
 Intersection LOS: F
 Intersection Capacity Utilization 111.4%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino ~~Marcos~~ ^{19/11/2019} Mendes Machado



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1928 | 471 | 0 | 2120 | 0 | 171 | 984 | 86 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | | 0.850 | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 3% | 2% | 1% | 1% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2216 | 612 | 0 | 2437 | 0 | 222 | 1131 | 112 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2277 | 551 | 0 | 2437 | 0 | 0 | 1353 | 112 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 76.0 | 76.0 | | 81.0 | | 45.0 | 45.0 | 45.0 | | |
| Total Split (%) | | 60.3% | 60.3% | | 64.3% | | 35.7% | 35.7% | 35.7% | | |
| Maximum Green (s) | | 72.0 | 72.0 | | 76.0 | | 40.0 | 40.0 | 40.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 77.0 | 77.0 | | 76.0 | | | 40.0 | 40.0 | | |
| Actuated g/C Ratio | | 0.61 | 0.61 | | 0.60 | | | 0.32 | 0.32 | | |
| v/c Ratio | | 1.20 | 0.67 | | 0.86 | | | 1.30 | 0.23 | | |
| Control Delay | | 120.6 | 21.1 | | 10.9 | | | 177.5 | 33.4 | | |
| Queue Delay | | 0.2 | 0.0 | | 4.4 | | | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

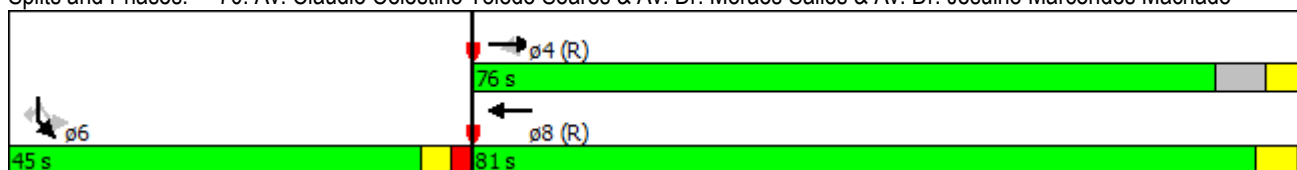


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|-------|-----|------|-----|------|--------|------|------|-----|
| Total Delay | | 120.8 | 21.1 | | 15.4 | | | 177.6 | 33.4 | | |
| LOS | | F | C | | B | | | F | C | | |
| Approach Delay | | 101.4 | | | 15.4 | | | 166.6 | | | |
| Approach LOS | | F | | | B | | | F | | | |
| Stops (vph) | | 1623 | 310 | | 1346 | | | 937 | 70 | | |
| Fuel Used(l) | | 247 | 21 | | 60 | | | 189 | 5 | | |
| CO Emissions (g/hr) | | 4603 | 397 | | 1112 | | | 3513 | 86 | | |
| NOx Emissions (g/hr) | | 888 | 77 | | 215 | | | 678 | 17 | | |
| VOC Emissions (g/hr) | | 1062 | 91 | | 256 | | | 810 | 20 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~395.7 | 97.8 | | 54.4 | | | ~232.5 | 21.5 | | |
| Queue Length 95th (m) | | #416.2 | 135.1 | | 55.7 | | | #261.9 | 35.9 | | |
| Internal Link Dist (m) | | 121.0 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1898 | 825 | | 2848 | | | 1042 | 480 | | |
| Starvation Cap Reductn | | 0 | 0 | | 347 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 153 | 0 | | 0 | | | 10 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.30 | 0.67 | | 0.97 | | | 1.31 | 0.23 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 126
 Actuated Cycle Length: 126
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.30
 Intersection Signal Delay: 84.4
 Intersection LOS: F
 Intersection Capacity Utilization 172.8%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑↑ | | | |
| Volume (vph) | 0 | 563 | 602 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.932 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 731 | 782 | 656 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 731 | 1438 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 66.0% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 204 | 471 | 34 | 198 | 426 | 16 | 14 | 44 | 24 | 15 | 73 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.956 | | | 0.929 | |
| Flt Protected | | 0.986 | | | 0.985 | | | 0.992 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 3118 | 0 | 0 | 3069 | 0 |
| Flt Permitted | | 0.986 | | | 0.985 | | | 0.867 | | | 0.918 | |
| Satd. Flow (perm) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 2725 | 0 | 0 | 2829 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 101.8 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 265 | 612 | 44 | 257 | 553 | 21 | 18 | 57 | 31 | 19 | 95 | 103 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 921 | 0 | 0 | 831 | 0 | 0 | 106 | 0 | 0 | 217 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 29.0 | 29.0 | | 27.0 | 27.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Total Split (%) | 41.4% | 41.4% | | 38.6% | 38.6% | | 20.0% | 20.0% | | 20.0% | 20.0% | |
| Maximum Green (s) | 23.0 | 23.0 | | 21.0 | 21.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lead | Lead | | Lag | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 23.0 | | | 21.0 | | | 9.0 | | | 9.0 | |
| Actuated g/C Ratio | | 0.33 | | | 0.30 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 0.86 | | | 0.86 | | | 0.30 | | | 0.60 | |
| Control Delay | | 32.5 | | | 34.7 | | | 30.3 | | | 36.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 32.5 | | | 34.7 | | | 30.3 | | | 36.3 | |
| LOS | | C | | | C | | | C | | | D | |
| Approach Delay | | 32.5 | | | 34.7 | | | 30.3 | | | 36.3 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|-------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | C | | | C | | | C | | | D | |
| Stops (vph) | | 692 | | | 629 | | | 80 | | | 174 | |
| Fuel Used(l) | | 50 | | | 59 | | | 5 | | | 11 | |
| CO Emissions (g/hr) | | 921 | | | 1092 | | | 87 | | | 205 | |
| NOx Emissions (g/hr) | | 178 | | | 211 | | | 17 | | | 40 | |
| VOC Emissions (g/hr) | | 213 | | | 252 | | | 20 | | | 47 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 61.7 | | | 56.4 | | | 7.1 | | | 15.1 | |
| Queue Length 95th (m) | | #89.5 | | | #83.2 | | | 13.6 | | | 24.8 | |
| Internal Link Dist (m) | | 77.9 | | | 63.4 | | | 62.2 | | | 77.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1066 | | | 961 | | | 350 | | | 363 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.86 | | | 0.86 | | | 0.30 | | | 0.60 | |

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 41 (59%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 33.7 Intersection LOS: C
 Intersection Capacity Utilization 70.3% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1875 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | 0.991 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2435 | 160 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2595 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 47.4% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 423 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 1269 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.988 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 549 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 792 | 1648 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 598 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2440 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 32.0 | | | | | | | | 68.0 | 68.0 | |
| Total Split (%) | | 32.0% | | | | | | | | 68.0% | 68.0% | |
| Maximum Green (s) | | 25.0 | | | | | | | | 63.0 | 63.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 25.0 | | | | | | | | | 63.0 | |
| Actuated g/C Ratio | | 0.25 | | | | | | | | | 0.63 | |
| v/c Ratio | | 0.72 | | | | | | | | | 0.84 | |
| Control Delay | | 40.1 | | | | | | | | | 3.9 | |
| Queue Delay | | 0.8 | | | | | | | | | 46.7 | |
| Total Delay | | 40.9 | | | | | | | | | 50.6 | |
| LOS | | D | | | | | | | | | D | |
| Approach Delay | | 40.9 | | | | | | | | | 50.6 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

18/11/2019



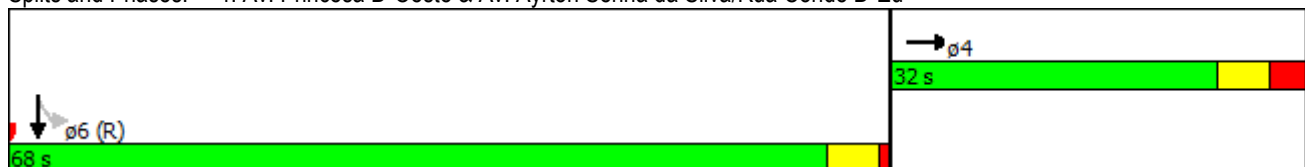
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|--|
| Approach LOS | | D | | | | | | | | | | D | |
| Stops (vph) | | 463 | | | | | | | | | | 1041 | |
| Fuel Used(l) | | 29 | | | | | | | | | | 39 | |
| CO Emissions (g/hr) | | 547 | | | | | | | | | | 722 | |
| NOx Emissions (g/hr) | | 106 | | | | | | | | | | 139 | |
| VOC Emissions (g/hr) | | 126 | | | | | | | | | | 167 | |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 | |
| Queue Length 50th (m) | | 58.9 | | | | | | | | | | 49.7 | |
| Queue Length 95th (m) | | 75.5 | | | | | | | | | | m42.6 | |
| Internal Link Dist (m) | | 35.9 | | | 7.7 | | | 0.1 | | | 21.2 | | |
| Turn Bay Length (m) | | | | | | | | | | | | | |
| Base Capacity (vph) | | 828 | | | | | | | | | | 2894 | |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 828 | |
| Spillback Cap Reductn | | 62 | | | | | | | | | | 529 | |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 | |
| Reduced v/c Ratio | | 0.78 | | | | | | | | | | 1.18 | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 10 (10%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.84 |
| Intersection Signal Delay: | 48.7 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 66.3% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1879 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.953 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 526 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2441 | 1108 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 526 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3549 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | | 77.0 | |
| Total Split (%) | | 23.0% | | | | | | | | | 77.0% | |
| Maximum Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 72.0 | |
| Actuated g/C Ratio | | 0.16 | | | | | | | | | 0.72 | |
| v/c Ratio | | 0.99 | | | | | | | | | 1.05 | |
| Control Delay | | 79.9 | | | | | | | | | 35.7 | |
| Queue Delay | | 14.3 | | | | | | | | | 23.5 | |
| Total Delay | | 94.2 | | | | | | | | | 59.2 | |
| LOS | | F | | | | | | | | | E | |
| Approach Delay | | 94.2 | | | | | | | | | 59.2 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019

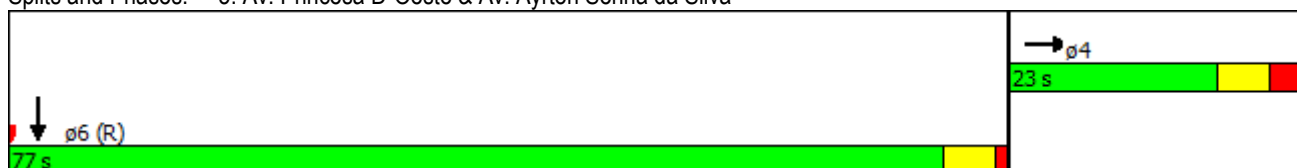


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|-----|--------|
| Approach LOS | | F | | | | | | | | | | E |
| Stops (vph) | | 404 | | | | | | | | | | 2582 |
| Fuel Used(l) | | 40 | | | | | | | | | | 163 |
| CO Emissions (g/hr) | | 750 | | | | | | | | | | 3029 |
| NOx Emissions (g/hr) | | 145 | | | | | | | | | | 585 |
| VOC Emissions (g/hr) | | 173 | | | | | | | | | | 699 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 57.0 | | | | | | | | | | ~292.3 |
| Queue Length 95th (m) | | #87.3 | | | | | | | | | | #295.3 |
| Internal Link Dist (m) | | 47.4 | | | 12.6 | | | 21.2 | | | | 44.4 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 531 | | | | | | | | | | 3396 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 26 | | | | | | | | | | 438 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 1.04 | | | | | | | | | | 1.20 |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 96 (96%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 120 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.05 |
| Intersection Signal Delay: | 63.7 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 85.2% |
| ICU Level of Service | E |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa

| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 1868 | 7 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1542 | 4960 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1542 | 4960 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 394 | 2426 | 9 | 492 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 394 | 2435 | 0 | 492 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 72.0 | | 28.0 |
| Total Split (%) | | 72.0% | | 28.0% |
| Maximum Green (s) | | 67.0 | | 23.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 100.0 | 67.0 | | 23.0 |
| Actuated g/C Ratio | 1.00 | 0.67 | | 0.23 |
| v/c Ratio | 0.26 | 0.73 | | 0.63 |
| Control Delay | 0.4 | 10.2 | | 19.5 |
| Queue Delay | 0.0 | 0.2 | | 0.0 |
| Total Delay | 0.4 | 10.5 | | 19.5 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | B | | B |
| Approach Delay | | 10.5 | | 19.5 |
| Approach LOS | | B | | B |
| Stops (vph) | 0 | 1032 | | 336 |
| Fuel Used(l) | 1 | 67 | | 15 |
| CO Emissions (g/hr) | 24 | 1237 | | 283 |
| NOx Emissions (g/hr) | 5 | 239 | | 55 |
| VOC Emissions (g/hr) | 6 | 285 | | 65 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 75.3 | | 26.5 |
| Queue Length 95th (m) | 0.0 | 78.6 | | 42.3 |
| Internal Link Dist (m) | | 108.8 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1542 | 3323 | | 779 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 184 | 262 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.29 | 0.80 | | 0.63 |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 94 (94%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 10.6

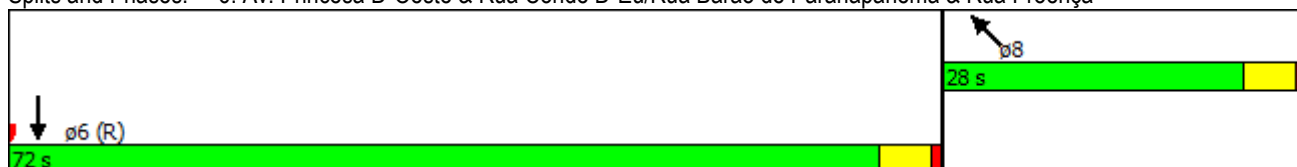
Intersection LOS: B

Intersection Capacity Utilization 61.1%

ICU Level of Service B

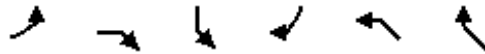
Analysis Period (min) 15

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

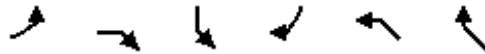
18/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations | ↖ ↗ | | | | ↖ ↗ | | |
| Volume (vph) | 1644 | 0 | 0 | 0 | 0 | 1884 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 2135 | 0 | 0 | 0 | 0 | 2447 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 2135 | 0 | 0 | 0 | 0 | 2447 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | Prot | | | Prot | | | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | 2 | |
| Minimum Split (s) | | | | | | 22.0 | 22.0 |
| Total Split (s) | | | | | | 78.0 | 72.0 |
| Total Split (%) | 48.0% | | | | | 52.0% | 48% |
| Maximum Green (s) | | | | | | 72.0 | 66.0 |
| Yellow Time (s) | | | | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | | | | 0.0 | |
| Total Lost Time (s) | | | | | | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | | 0 | 0 |
| Act Effct Green (s) | | | | | | 72.0 | |
| Actuated g/C Ratio | | | | | | 0.48 | |
| v/c Ratio | | | | | | 1.48 | |
| Control Delay | | | | | | 248.8 | |
| Queue Delay | | | | | | 0.0 | |
| Total Delay | | | | | | 248.8 | |
| LOS | | | | | | F | F |
| Approach Delay | | | | | | 239.0 | |

Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

18/11/2019

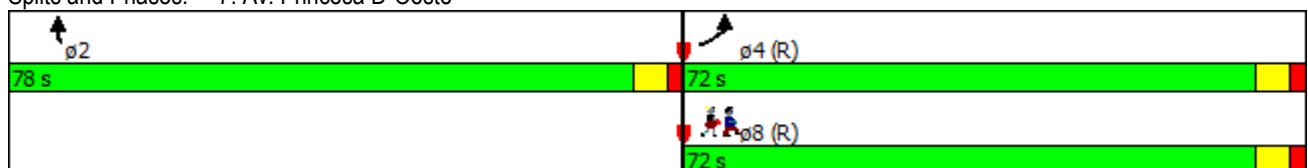


| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|------------------------|--------|-----|------|--------|-------|-----|----|
| Approach LOS | F | | | | | | |
| Stops (vph) | 1356 | | | 1531 | | | |
| Fuel Used(l) | 375 | | | 533 | | | |
| CO Emissions (g/hr) | 6983 | | | 9906 | | | |
| NOx Emissions (g/hr) | 1348 | | | 1912 | | | |
| VOC Emissions (g/hr) | 1611 | | | 2285 | | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | | |
| Queue Length 50th (m) | ~467.6 | | | ~460.6 | | | |
| Queue Length 95th (m) | #483.0 | | | #468.9 | | | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 1474 | | | 1657 | | | |
| Starvation Cap Reductn | 0 | | | 0 | | | |
| Spillback Cap Reductn | 196 | | | 0 | | | |
| Storage Cap Reductn | 0 | | | 0 | | | |
| Reduced v/c Ratio | 1.67 | | | 1.48 | | | |

Intersection Summary

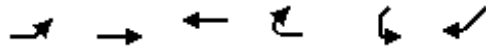
| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 95 (63%), Referenced to phase 4:EBL and 8:Ped, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.48 |
| Intersection Signal Delay: | 244.3 |
| Intersection LOS: | F |
| Intersection Capacity Utilization | 112.6% |
| ICU Level of Service | H |
| Analysis Period (min) | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

Splits and Phases: 7: Av. Princesa D'Oeste



Lanes, Volumes, Timings
8: Av. Ayrton Senna da Silva

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 405 | 461 | 0 | 0 | 0 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 526 | 599 | 0 | 0 | 0 | 1108 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 526 | 599 | 0 | 0 | 0 | 1108 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 37.1% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 159 | 241 | 15 | 112 | 304 | 38 | 11 | 166 | 163 | 15 | 284 | 362 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | 0.989 | | | 0.935 | | | 0.926 | |
| Flt Protected | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Flt Permitted | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 125.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 9.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 207 | 313 | 19 | 145 | 395 | 49 | 14 | 216 | 212 | 19 | 369 | 470 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 539 | 0 | 0 | 589 | 0 | 0 | 442 | 0 | 0 | 858 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

| | |
|-----------------------------------|------------|
| Area Type: | Other |
| Control Type: | Roundabout |
| Intersection Capacity Utilization | 97.0% |
| ICU Level of Service | F |
| Analysis Period (min) | 15 |



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 581 | 769 | 647 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.865 | 0.936 | |
| Flt Protected | | | | | 0.972 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1816 | 3228 | 0 |
| Flt Permitted | | | | | 0.972 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1816 | 3228 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Confl. Peds. (#/hr) | | | | | 452 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 668 | 999 | 744 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 668 | 1743 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 48.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

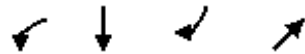
17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑↑ | | ↑↑↑↑ |
| Volume (vph) | 323 | 2802 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Fr _t | | 0.996 | | |
| Fl _t Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4846 | 0 | 4716 |
| Fl _t Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4846 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 420 | 3639 | 90 | 1482 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 420 | 3729 | 0 | 1482 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 46.0 | 104.0 | | 46.0 |
| Total Split (%) | 30.7% | 69.3% | | 30.7% |
| Maximum Green (s) | 42.0 | 98.0 | | 41.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 42.0 | 98.0 | | 41.0 |
| Actuated g/C Ratio | 0.28 | 0.65 | | 0.27 |
| v/c Ratio | 0.45 | 1.18 | | 1.15 |
| Control Delay | 1.1 | 110.0 | | 121.1 |
| Queue Delay | 3.4 | 0.3 | | 3.5 |
| Total Delay | 4.5 | 110.3 | | 124.6 |
| LOS | A | F | | F |
| Approach Delay | | 110.3 | | 124.6 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho

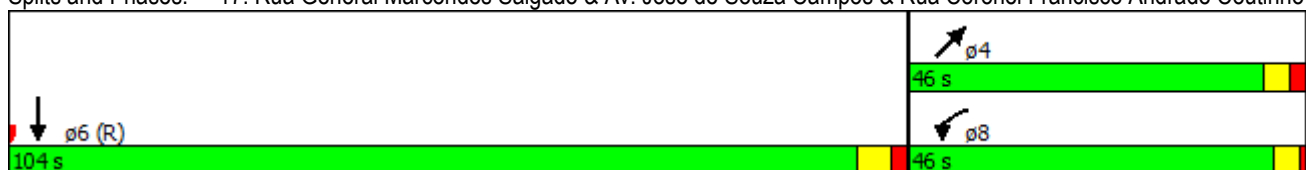


| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|--------|------|--------|
| Approach LOS | | F | | F |
| Stops (vph) | 0 | 2685 | | 1126 |
| Fuel Used(l) | 1 | 398 | | 153 |
| CO Emissions (g/hr) | 27 | 7401 | | 2848 |
| NOx Emissions (g/hr) | 5 | 1429 | | 550 |
| VOC Emissions (g/hr) | 6 | 1707 | | 657 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | ~510.2 | | ~199.5 |
| Queue Length 95th (m) | 0.0 | #496.7 | | #219.6 |
| Internal Link Dist (m) | | 180.5 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 938 | 3166 | | 1289 |
| Starvation Cap Reductn | 280 | 0 | | 635 |
| Spillback Cap Reductn | 411 | 416 | | 429 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.80 | 1.36 | | 2.27 |

Intersection Summary

| | |
|---|--|
| Area Type: | Other |
| Cycle Length: | 150 |
| Actuated Cycle Length: | 150 |
| Offset: | 149 (99%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 150 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.18 |
| Intersection Signal Delay: | 106.2 |
| Intersection LOS: | F |
| Intersection Capacity Utilization: | 110.7% |
| ICU Level of Service: | H |
| Analysis Period (min): | 15 |
| ~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles. | |
| # 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles. | |

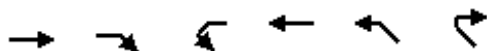
Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho



Lanes, Volumes, Timings

18: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



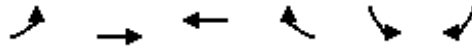
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 951 | 442 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.948 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3243 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3243 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 1093 | 574 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1667 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.88 | 0.88 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 45.6% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 96 | 394 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 96 | 394 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.9% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

18/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 386 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 501 | 96 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 501 | 96 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 39.9% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 105 | 928 | 0 | 0 | 0 | 0 | 0 | 799 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Frnt | | | | | | | | 0.973 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 136 | 1205 | 0 | 0 | 0 | 0 | 0 | 1038 | 232 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1341 | 0 | 0 | 0 | 0 | 0 | 1270 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | | 15 | 25 | | 15 | 25 | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 58.0 | 58.0 | | | | | | 42.0 | | | | |
| Total Split (%) | 58.0% | 58.0% | | | | | | 42.0% | | | | |
| Maximum Green (s) | 51.0 | 51.0 | | | | | | 37.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 51.0 | | | | | | 37.0 | | | | |
| Actuated g/C Ratio | | 0.51 | | | | | | 0.37 | | | | |
| v/c Ratio | | 0.77 | | | | | | 0.75 | | | | |
| Control Delay | | 16.8 | | | | | | 30.8 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 16.8 | | | | | | 30.8 | | | | |
| LOS | | B | | | | | | C | | | | |
| Approach Delay | | 16.8 | | | | | | 30.8 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019

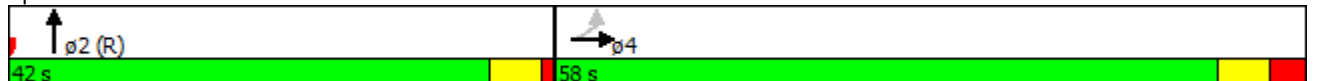


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|------------------------|-----|-------|-----|-----|------|-----|-----|-----|------|-----|------|-----|--|
| Approach LOS | | B | | | | | | | C | | | | |
| Stops (vph) | | 710 | | | | | | | 929 | | | | |
| Fuel Used(l) | | 35 | | | | | | | 50 | | | | |
| CO Emissions (g/hr) | | 643 | | | | | | | 927 | | | | |
| NOx Emissions (g/hr) | | 124 | | | | | | | 179 | | | | |
| VOC Emissions (g/hr) | | 148 | | | | | | | 214 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | 0 | | | | |
| Queue Length 50th (m) | | 80.8 | | | | | | | 81.4 | | | | |
| Queue Length 95th (m) | | 115.6 | | | | | | | 94.4 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | | |
| Turn Bay Length (m) | | | | | | | | | | | | | |
| Base Capacity (vph) | | 1736 | | | | | | | 1700 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 0.77 | | | | | | | 0.75 | | | | |

Intersection Summary

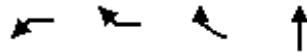
| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 4 (4%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.77 |
| Intersection Signal Delay: | 23.6 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 64.4% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

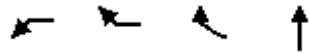


Lanes, Volumes, Timings
26: Rua Conde D'Eu & Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 561 | 379 | 225 | 1309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.956 | 0.850 | | |
| Flt Protected | 0.966 | | | |
| Satd. Flow (prot) | 3239 | 1371 | 0 | 4964 |
| Flt Permitted | 0.966 | | | |
| Satd. Flow (perm) | 3239 | 1371 | 0 | 4964 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 729 | 492 | 292 | 1700 |
| Shared Lane Traffic (%) | | 62% | | |
| Lane Group Flow (vph) | 1034 | 479 | 0 | 1700 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 53.0 | 53.0 | | 47.0 |
| Total Split (%) | 53.0% | 53.0% | | 47.0% |
| Maximum Green (s) | 48.0 | 48.0 | | 42.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 48.0 | 48.0 | | 42.0 |
| Actuated g/C Ratio | 0.48 | 0.48 | | 0.42 |
| v/c Ratio | 0.67 | 0.73 | | 0.82 |
| Control Delay | 18.8 | 24.6 | | 14.7 |
| Queue Delay | 15.1 | 34.6 | | 0.4 |
| Total Delay | 33.9 | 59.3 | | 15.2 |
| LOS | C | E | | B |
| Approach Delay | 42.0 | | | 15.2 |

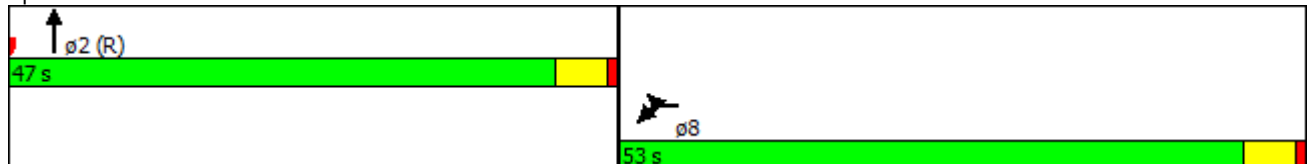


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|-------|------|------|
| Approach LOS | D | | | B |
| Stops (vph) | 550 | 298 | | 1181 |
| Fuel Used(l) | 35 | 19 | | 53 |
| CO Emissions (g/hr) | 644 | 351 | | 984 |
| NOx Emissions (g/hr) | 124 | 68 | | 190 |
| VOC Emissions (g/hr) | 148 | 81 | | 227 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 62.3 | 68.0 | | 67.3 |
| Queue Length 95th (m) | 71.2 | 100.5 | | 76.2 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1554 | 658 | | 2084 |
| Starvation Cap Reductn | 0 | 0 | | 98 |
| Spillback Cap Reductn | 522 | 201 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 1.00 | 1.05 | | 0.86 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 7 (7%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.82 |
| Intersection Signal Delay: | 27.8 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 65.9% |
| ICU Level of Service | C |
| Analysis Period (min) | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations | | | | | ↖ ↗ | ↑ ↑ ↑ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1644 | 1998 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2135 | 2595 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2135 | 2595 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 92.0 | 92.0 | 8.0 |
| Total Split (%) | | | | | 92.0% | 92.0% | 8% |
| Maximum Green (s) | | | | | 86.0 | 86.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 86.0 | 86.0 | |
| Actuated g/C Ratio | | | | | 0.86 | 0.86 | |
| v/c Ratio | | | | | 0.76 | 0.62 | |
| Control Delay | | | | | 5.0 | 2.9 | |
| Queue Delay | | | | | 15.2 | 4.6 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 20.2 | 7.5 | |
| LOS | | | | | C | A | |
| Approach Delay | | | | | | 13.2 | |
| Approach LOS | | | | | | B | |
| Stops (vph) | | | | | 636 | 553 | |
| Fuel Used(l) | | | | | 36 | 35 | |
| CO Emissions (g/hr) | | | | | 666 | 651 | |
| NOx Emissions (g/hr) | | | | | 129 | 126 | |
| VOC Emissions (g/hr) | | | | | 154 | 150 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 56.3 | 36.4 | |
| Queue Length 95th (m) | | | | | 66.2 | 39.5 | |
| Internal Link Dist (m) | 0.1 | | 259.4 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2824 | 4183 | |
| Starvation Cap Reductn | | | | | 728 | 1508 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 1.02 | 0.97 | |

Intersection Summary

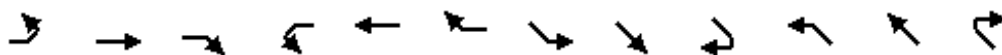
| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 83 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.76 |
| Intersection Signal Delay: | 13.2 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 64.5% |
| ICU Level of Service: | C |
| Analysis Period (min): | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

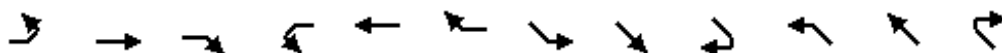
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 2121 | 0 | 0 | 1612 | 214 | 0 | 0 | 0 | 299 | 557 | 102 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.982 | | | | | | 0.997 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1723 | 1483 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1723 | 1483 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 100% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 100% | 100% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 1% | 0% |
| Adj. Flow (vph) | 0 | 2438 | 0 | 0 | 2094 | 278 | 0 | 0 | 0 | 344 | 640 | 132 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 10% |
| Lane Group Flow (vph) | 0 | 2438 | 0 | 0 | 2372 | 0 | 0 | 0 | 0 | 344 | 653 | 119 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | | 57.0 | | | 57.0 | | | | | 43.0 | 43.0 | 43.0 |
| Total Split (%) | | 57.0% | | | 57.0% | | | | | 43.0% | 43.0% | 43.0% |
| Maximum Green (s) | | 52.0 | | | 53.0 | | | | | 38.0 | 38.0 | 38.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 52.0 | | | 53.0 | | | | | 38.0 | 38.0 | 38.0 |
| Actuated g/C Ratio | | 0.52 | | | 0.53 | | | | | 0.38 | 0.38 | 0.38 |
| v/c Ratio | | 0.99 | | | 0.97 | | | | | 0.52 | 1.00 | 0.21 |
| Control Delay | | 15.9 | | | 35.9 | | | | | 22.5 | 61.3 | 18.2 |
| Queue Delay | | 39.7 | | | 0.0 | | | | | 46.8 | 34.8 | 6.6 |
| Total Delay | | 55.7 | | | 35.9 | | | | | 69.3 | 96.1 | 24.9 |
| LOS | | E | | | D | | | | | E | F | C |
| Approach Delay | | 55.7 | | | 35.9 | | | | | | 80.2 | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|--------|-----|-----|------|-----|------|--------|------|
| Approach LOS | | E | | | D | | | | | | | F |
| Stops (vph) | | 1495 | | | 1782 | | | | | 209 | 486 | 55 |
| Fuel Used(l) | | 71 | | | 136 | | | | | 11 | 40 | 3 |
| CO Emissions (g/hr) | | 1326 | | | 2524 | | | | | 206 | 743 | 58 |
| NOx Emissions (g/hr) | | 256 | | | 487 | | | | | 40 | 143 | 11 |
| VOC Emissions (g/hr) | | 306 | | | 582 | | | | | 47 | 171 | 13 |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Queue Length 50th (m) | | 95.6 | | | 163.0 | | | | | 38.7 | 137.8 | 14.0 |
| Queue Length 95th (m) | | m40.0 | | | #185.4 | | | | | 60.9 | #207.8 | 22.8 |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 35.4 | | | 17.9 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2455 | | | 2444 | | | | | 663 | 654 | 563 |
| Starvation Cap Reductn | | 730 | | | 0 | | | | | 321 | 85 | 392 |
| Spillback Cap Reductn | | 0 | | | 0 | | | | | 341 | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Reduced v/c Ratio | | 1.41 | | | 0.97 | | | | | 1.07 | 1.15 | 0.70 |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 5 (5%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 52.4

Intersection LOS: D

Intersection Capacity Utilization 172.8%

ICU Level of Service H

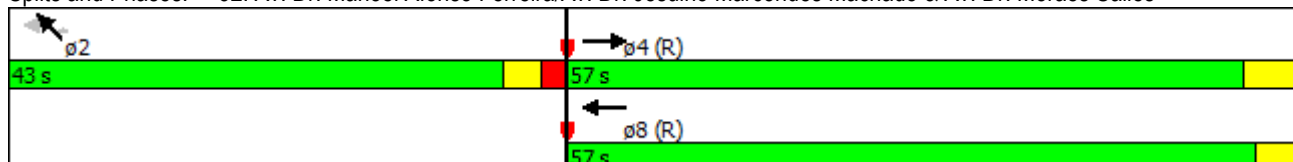
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

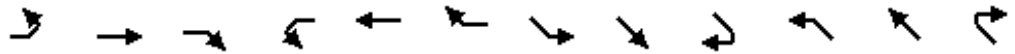
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019

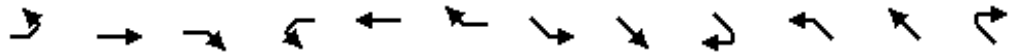


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↕↑ | | | | | | | | | ↑↕ | |
| Volume (vph) | 618 | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 53 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.978 | |
| Flt Protected | | 0.963 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3327 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Flt Permitted | | 0.963 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3327 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 100% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 710 | 225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 | 69 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 935 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 481 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | | 2 |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | | 21.0 |
| Total Split (s) | 61.0 | 61.0 | | | | | | | | | | 39.0 |
| Total Split (%) | 61.0% | 61.0% | | | | | | | | | | 39.0% |
| Maximum Green (s) | 57.0 | 57.0 | | | | | | | | | | 34.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | 0.0 |
| Total Lost Time (s) | | 4.0 | | | | | | | | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | | 0 |
| Act Effct Green (s) | | 57.0 | | | | | | | | | | 34.0 |
| Actuated g/C Ratio | | 0.57 | | | | | | | | | | 0.34 |
| v/c Ratio | | 0.49 | | | | | | | | | | 0.43 |
| Control Delay | | 9.8 | | | | | | | | | | 27.0 |
| Queue Delay | | 0.0 | | | | | | | | | | 0.9 |
| Total Delay | | 9.8 | | | | | | | | | | 28.0 |
| LOS | | A | | | | | | | | | | C |
| Approach Delay | | 9.8 | | | | | | | | | | 28.0 |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

18/11/2019



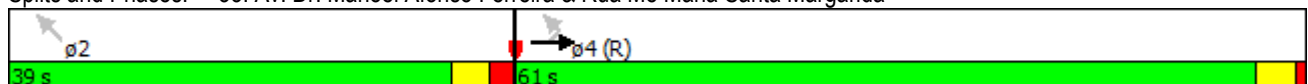
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| Approach LOS | | A | | | | | | | | | | C |
| Stops (vph) | | 322 | | | | | | | | | | 311 |
| Fuel Used(l) | | 15 | | | | | | | | | | 19 |
| CO Emissions (g/hr) | | 285 | | | | | | | | | | 350 |
| NOx Emissions (g/hr) | | 55 | | | | | | | | | | 68 |
| VOC Emissions (g/hr) | | 66 | | | | | | | | | | 81 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 36.2 | | | | | | | | | | 39.5 |
| Queue Length 95th (m) | | m38.3 | | | | | | | | | | 52.2 |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | | 17.9 | | | | 55.5 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1896 | | | | | | | | | | 1115 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 69 | | | | | | | | | | 371 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.51 | | | | | | | | | | 0.65 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 63 (63%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.49 |
| Intersection Signal Delay: | 16.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 53.5% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | | | ↑↑ | | ↑↑ |
| Volume (vph) | 0 | 0 | 0 | 1274 | 0 | 799 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 129.4 | 59.4 | |
| Travel Time (s) | 4.6 | | | 9.3 | 4.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 100% | 113% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1464 | 0 | 918 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1464 | 0 | 918 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |

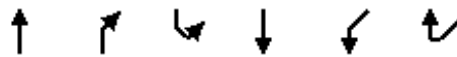
Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 38.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

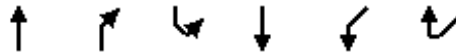


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 2298 | 1230 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2985 | 1598 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 4583 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 142.0 | | | | | | 8.0 |
| Total Split (%) | 94.7% | | | | | | 5% |
| Maximum Green (s) | 136.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 136.0 | | | | | | |
| Actuated g/C Ratio | 0.91 | | | | | | |
| v/c Ratio | 1.14dr | | | | | | |
| Control Delay | 48.2 | | | | | | |
| Queue Delay | 5.3 | | | | | | |
| Total Delay | 53.5 | | | | | | |
| LOS | D | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|--------|-----|-----|------|------|-----|-----|
| Approach Delay | 53.5 | | | | | | |
| Approach LOS | D | | | | | | |
| Stops (vph) | 1676 | | | | | | |
| Fuel Used(l) | 211 | | | | | | |
| CO Emissions (g/hr) | 3923 | | | | | | |
| NOx Emissions (g/hr) | 757 | | | | | | |
| VOC Emissions (g/hr) | 905 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | ~589.3 | | | | | | |
| Queue Length 95th (m) | m20.0 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 39.4 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 4208 | | | | | | |
| Starvation Cap Reductn | 1185 | | | | | | |
| Spillback Cap Reductn | 947 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.52 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 107 (71%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 53.5
 Intersection LOS: D
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 323 | 259 | 0 | 2298 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.970 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 420 | 336 | 0 | 2985 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 31% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 524 | 232 | 0 | 2985 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 41.0 | 41.0 | 109.0 | 109.0 | | | | |
| Total Split (%) | | | | | 27.3% | 27.3% | 72.7% | 72.7% | | | | |
| Maximum Green (s) | | | | | 36.0 | 36.0 | 103.0 | 103.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 36.0 | 36.0 | | 103.0 | | | | |
| Actuated g/C Ratio | | | | | 0.24 | 0.24 | | 0.69 | | | | |
| v/c Ratio | | | | | 0.69 | 0.69 | | 0.89 | | | | |
| Control Delay | | | | | 57.6 | 64.3 | | 14.5 | | | | |
| Queue Delay | | | | | 54.7 | 105.8 | | 46.3 | | | | |
| Total Delay | | | | | 112.2 | 170.0 | | 60.7 | | | | |
| LOS | | | | | F | F | | E | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

18/11/2019

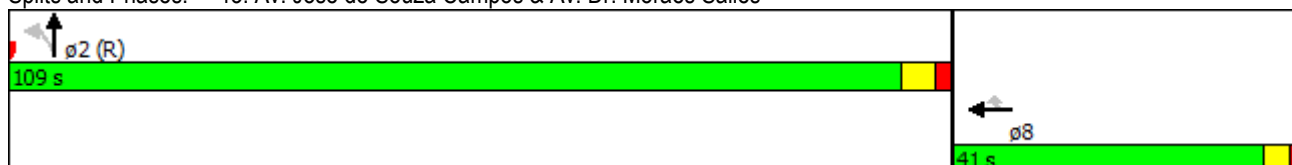


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|-------|-------|-----|--------|-----|-----|------|-----|
| Approach Delay | | | | | 130.0 | | | 60.7 | | | | |
| Approach LOS | | | | | F | | | E | | | | |
| Stops (vph) | | | | | 410 | 184 | | 1935 | | | | |
| Fuel Used(l) | | | | | 32 | 15 | | 88 | | | | |
| CO Emissions (g/hr) | | | | | 603 | 288 | | 1634 | | | | |
| NOx Emissions (g/hr) | | | | | 116 | 55 | | 315 | | | | |
| VOC Emissions (g/hr) | | | | | 139 | 66 | | 377 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 82.9 | 73.5 | | 235.7 | | | | |
| Queue Length 95th (m) | | | | | 100.9 | 104.8 | | m184.9 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 756 | 334 | | 3340 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 1170 | | | | |
| Spillback Cap Reductn | | | | | 335 | 296 | | 334 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 1.24 | 6.11 | | 1.38 | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 146 (97%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 74.7
 Intersection LOS: E
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

18/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|--------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 732 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.936 | |
| Flt Protected | 0.950 | 0.999 | 0.950 | | |
| Satd. Flow (prot) | 1572 | 3306 | 1641 | 4396 | 0 |
| Flt Permitted | 0.950 | 0.999 | 0.950 | | |
| Satd. Flow (perm) | 1572 | 3306 | 1641 | 4396 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 218.5 | |
| Travel Time (s) | | 2.4 | | 15.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 187 | 614 | 866 | 1295 | 951 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 168 | 633 | 866 | 2246 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 42.0 | 42.0 | 108.0 | 108.0 | |
| Total Split (%) | 28.0% | 28.0% | 72.0% | 72.0% | |
| Maximum Green (s) | 38.0 | 38.0 | 104.0 | 104.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 38.0 | 38.0 | 104.0 | 104.0 | |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.69 | 0.69 | |
| v/c Ratio | 0.42 | 0.76 | 0.76 | 0.94dr | |
| Control Delay | 50.7 | 58.5 | 20.6 | 16.3 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 50.9 | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|------|-------|-------|-------|-----|
| Total Delay | 50.7 | 58.5 | 20.6 | 67.2 | |
| LOS | D | E | C | E | |
| Approach Delay | | 56.8 | | 54.2 | |
| Approach LOS | | E | | D | |
| Stops (vph) | 120 | 501 | 483 | 1169 | |
| Fuel Used(l) | 9 | 38 | 38 | 91 | |
| CO Emissions (g/hr) | 165 | 702 | 714 | 1698 | |
| NOx Emissions (g/hr) | 32 | 136 | 138 | 328 | |
| VOC Emissions (g/hr) | 38 | 162 | 165 | 392 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 48.6 | 101.3 | 163.3 | 149.6 | |
| Queue Length 95th (m) | 72.3 | 120.6 | 206.0 | 155.0 | |
| Internal Link Dist (m) | | 9.3 | | 194.5 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 398 | 837 | 1137 | 3047 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 2233 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.42 | 0.76 | 0.76 | 2.76 | |

Intersection Summary

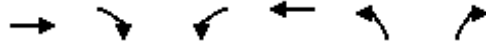
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 18 (12%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 54.8 Intersection LOS: D
 Intersection Capacity Utilization 63.2% ICU Level of Service B
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

| | |
|--------|------|
| 02 (R) | 04 |
| 108 s | 42 s |

Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 18/11/2019
















| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1164 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.995 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1512 | 53 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1565 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.8% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

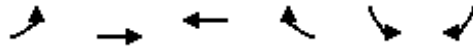
Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade

| |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
| Lane Configurations | | | | |  |  |  | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | | 0.850 | | | | |
| Fl _t Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Fl _t Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 9 | 81 | 866 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 9 | 81 | 866 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |
| Intersection Summary | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | |
| Control Type: | Unsignalized | | | | | | | | | |
| Intersection Capacity Utilization | 43.2% | | | | | ICU Level of Service A | | | | |
| Analysis Period (min) | 15 | | | | | | | | | |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 792 | 0 | 0 | 9 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 792 | 0 | 0 | 9 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1164 | 0 | 0 | 2478 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Fr't | | 0.850 | | | 0.969 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1512 | 0 | 0 | 3219 | 840 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1512 | 0 | 0 | 4059 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 52.0 | | | 98.0 | | | |
| Total Split (%) | | 34.7% | | | 65.3% | | | |
| Maximum Green (s) | | 48.0 | | | 94.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 48.0 | | | 94.0 | | | |
| Actuated g/C Ratio | | 0.32 | | | 0.63 | | | |
| v/c Ratio | | 1.35 | | | 1.37 | | | |
| Control Delay | | 200.1 | | | 184.5 | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | |
| Total Delay | | 200.1 | | | 184.5 | | | |
| LOS | | F | | | F | | | |
| Approach Delay | | | | | 184.5 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 18/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|--------|-----|------|---------|-----|------|-----|
| Approach LOS | | | | | F | | | |
| Stops (vph) | | 969 | | | 2412 | | | |
| Fuel Used(l) | | 229 | | | 575 | | | |
| CO Emissions (g/hr) | | 4264 | | | 10695 | | | |
| NOx Emissions (g/hr) | | 823 | | | 2064 | | | |
| VOC Emissions (g/hr) | | 983 | | | 2467 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | ~267.0 | | | ~612.1 | | | |
| Queue Length 95th (m) | | #291.2 | | | m#478.3 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1116 | | | 2960 | | | |
| Starvation Cap Reductn | | 0 | | | 2 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 1.35 | | | 1.37 | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 7 (5%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay: 188.7
 Intersection LOS: F
 Intersection Capacity Utilization 107.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



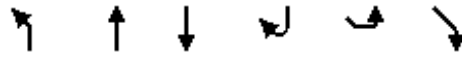
Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

18/11/2019

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↘ | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 53 | 840 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 53 | 840 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 50.5% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 978 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 184.1 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.3 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 1270 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1338 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service B |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

18/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1307 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 141.1 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.2 | | | 1.6 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 68 | 0 | 0 | 0 | 0 | 1698 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 68 | 0 | 0 | 0 | 0 | 1698 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 57.7% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

18/11/2019

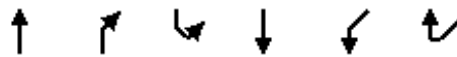


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↗ | | | ↑↑↑ | | |
| Volume (vph) | 405 | 0 | 0 | 904 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Adj. Flow (vph) | 526 | 0 | 0 | 1174 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 526 | 0 | 0 | 1174 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 45.0 | | | 55.0 | | |
| Total Split (%) | 45.0% | | | 55.0% | | |
| Maximum Green (s) | 38.0 | | | 50.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 38.0 | | | 50.0 | | |
| Actuated g/C Ratio | 0.38 | | | 0.50 | | |
| v/c Ratio | 0.42 | | | 0.48 | | |
| Control Delay | 1.2 | | | 3.5 | | |
| Queue Delay | 5.2 | | | 0.5 | | |
| Total Delay | 6.4 | | | 4.0 | | |
| LOS | A | | | A | | |
| Approach Delay | 6.4 | | | 4.0 | | |
| Approach LOS | A | | | A | | |
| Stops (vph) | 41 | | | 105 | | |

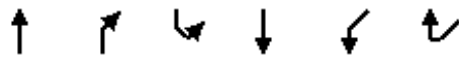
Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

18/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↘↘ | |
| Volume (vph) | 0 | 0 | 0 | 2171 | 561 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2820 | 729 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2820 | 729 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 69.0 | 31.0 | |
| Total Split (%) | | | | 69.0% | 31.0% | |
| Maximum Green (s) | | | | 64.0 | 26.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 64.0 | 26.0 | |
| Actuated g/C Ratio | | | | 0.64 | 0.26 | |
| v/c Ratio | | | | 0.89 | 0.84 | |
| Control Delay | | | | 9.1 | 24.3 | |
| Queue Delay | | | | 0.7 | 51.4 | |
| Total Delay | | | | 9.8 | 75.7 | |
| LOS | | | | A | E | |
| Approach Delay | | | | 9.8 | 75.7 | |
| Approach LOS | | | | A | E | |



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|-------|------|-----|
| Stops (vph) | | | | 1601 | 575 | |
| Fuel Used(l) | | | | 62 | 27 | |
| CO Emissions (g/hr) | | | | 1158 | 496 | |
| NOx Emissions (g/hr) | | | | 224 | 96 | |
| VOC Emissions (g/hr) | | | | 267 | 114 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 159.8 | 72.0 | |
| Queue Length 95th (m) | | | | 10.8 | 82.2 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 3176 | 871 | |
| Starvation Cap Reductn | | | | 4 | 0 | |
| Spillback Cap Reductn | | | | 124 | 352 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 0.92 | 1.40 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 100 |
| Actuated Cycle Length: | 100 |
| Offset: | 0 (0%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 65 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.89 |
| Intersection Signal Delay: | 23.3 |
| Intersection LOS: | C |
| Intersection Capacity Utilization | 73.8% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

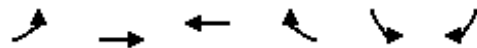
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

18/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 474 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.998 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3380 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 616 | 10 | 0 | 140 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 626 | 0 | 0 | 140 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 29.3% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
66: Av. José de Souza Campos

18/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↵ | ↶ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 2557 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 113% | 113% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1482 | 0 | 0 | 0 | 0 | 3321 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1482 | 0 | 0 | 0 | 0 | 3321 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 50.0 | | | | | 100.0 |
| Total Split (%) | 33.3% | | | | | 66.7% |
| Maximum Green (s) | 46.0 | | | | | 94.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 46.0 | | | | | 94.0 |
| Actuated g/C Ratio | 0.31 | | | | | 0.63 |
| v/c Ratio | 1.40 | | | | | 1.50 |
| Control Delay | 193.9 | | | | | 248.0 |
| Queue Delay | 0.6 | | | | | 0.0 |
| Total Delay | 194.4 | | | | | 248.0 |
| LOS | F | | | | | F |
| Approach Delay | 194.4 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|---------|-----|-----|------|------|--------|
| Approach LOS | F | | | | | |
| Stops (vph) | 179 | | | | | 2003 |
| Fuel Used(l) | 201 | | | | | 607 |
| CO Emissions (g/hr) | 3745 | | | | | 11291 |
| NOx Emissions (g/hr) | 723 | | | | | 2179 |
| VOC Emissions (g/hr) | 864 | | | | | 2604 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | ~168.8 | | | | | ~635.5 |
| Queue Length 95th (m) | m#101.3 | | | | | #623.6 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1059 | | | | | 2208 |
| Starvation Cap Reductn | 115 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.57 | | | | | 1.50 |

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 106 (71%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.50
 Intersection Signal Delay: 231.5
 Intersection LOS: F
 Intersection Capacity Utilization 111.4%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Macedo

19/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1928 | 471 | 0 | 2120 | 0 | 171 | 984 | 86 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 100% | 113% | 113% | 113% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 3% | 2% | 1% | 1% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2216 | 612 | 0 | 2437 | 0 | 222 | 1131 | 112 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2277 | 551 | 0 | 2437 | 0 | 0 | 1353 | 112 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 62.0 | 62.0 | | 62.0 | | 38.0 | 38.0 | 38.0 | | |
| Total Split (%) | | 62.0% | 62.0% | | 62.0% | | 38.0% | 38.0% | 38.0% | | |
| Maximum Green (s) | | 58.0 | 58.0 | | 57.0 | | 33.0 | 33.0 | 33.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 58.0 | 58.0 | | 57.0 | | 33.0 | 33.0 | 33.0 | | |
| Actuated g/C Ratio | | 0.58 | 0.58 | | 0.57 | | 0.33 | 0.33 | 0.33 | | |
| v/c Ratio | | 1.26 | 0.70 | | 0.91 | | 1.25 | 0.22 | 0.22 | | |
| Control Delay | | 146.3 | 21.1 | | 10.3 | | 151.0 | 25.8 | 25.8 | | |
| Queue Delay | | 0.6 | 0.0 | | 16.0 | | 0.2 | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

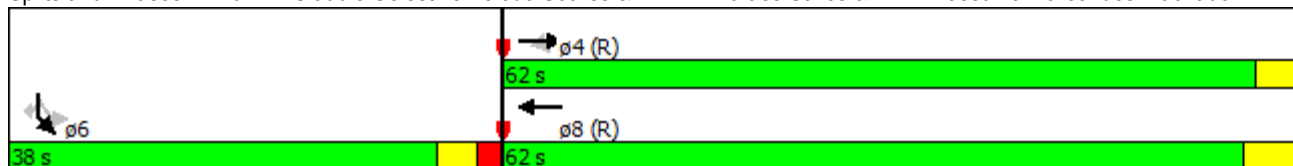


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|-------|-----|-------|-----|------|--------|------|------|-----|
| Total Delay | | 146.8 | 21.1 | | 26.3 | | | 151.2 | 25.8 | | |
| LOS | | F | C | | C | | | F | C | | |
| Approach Delay | | 122.3 | | | 26.3 | | | 141.6 | | | |
| Approach LOS | | F | | | C | | | F | | | |
| Stops (vph) | | 1572 | 337 | | 853 | | | 963 | 68 | | |
| Fuel Used(l) | | 286 | 22 | | 48 | | | 165 | 4 | | |
| CO Emissions (g/hr) | | 5310 | 408 | | 887 | | | 3077 | 75 | | |
| NOx Emissions (g/hr) | | 1025 | 79 | | 171 | | | 594 | 14 | | |
| VOC Emissions (g/hr) | | 1225 | 94 | | 205 | | | 710 | 17 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~322.7 | 81.8 | | 40.0 | | | ~178.5 | 16.4 | | |
| Queue Length 95th (m) | | #349.5 | 120.6 | | m46.2 | | | #209.2 | 29.1 | | |
| Internal Link Dist (m) | | 121.0 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1802 | 783 | | 2691 | | | 1083 | 499 | | |
| Starvation Cap Reductn | | 0 | 0 | | 317 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 301 | 0 | | 0 | | | 37 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.52 | 0.70 | | 1.03 | | | 1.29 | 0.22 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.26
 Intersection Signal Delay: 91.7
 Intersection LOS: F
 Intersection Capacity Utilization 172.8%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado



Lanes, Volumes, Timings

1: Rua Conde D'Eu & Av. Imperatriz D. Teresa Cristina

21/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 563 | 602 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.88 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | 0.850 | 0.932 | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 2694 | 3189 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 81.9 | | 108.9 | | | 108.1 |
| Travel Time (s) | 5.9 | | 7.8 | | | 7.8 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Adj. Flow (vph) | 0 | 615 | 657 | 551 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 615 | 1208 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.0 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Free | | | Stop |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 56.6% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↕↕ | | | ↕↕ | | | ↕↕ | | | ↕↕ | |
| Volume (vph) | 204 | 471 | 34 | 198 | 426 | 16 | 14 | 44 | 24 | 15 | 73 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 7% | | | 7% | | | 9% | | | 9% | |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.993 | | | 0.996 | | | 0.956 | | | 0.929 | |
| Flt Protected | | 0.986 | | | 0.985 | | | 0.992 | | | 0.996 | |
| Satd. Flow (prot) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 3118 | 0 | 0 | 3069 | 0 |
| Flt Permitted | | 0.986 | | | 0.985 | | | 0.875 | | | 0.920 | |
| Satd. Flow (perm) | 0 | 3245 | 0 | 0 | 3204 | 0 | 0 | 2751 | 0 | 0 | 2835 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 101.9 | | | 87.4 | | | 86.2 | | | 101.8 | |
| Travel Time (s) | | 7.3 | | | 6.3 | | | 6.2 | | | 7.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 1% | 2% | 0% | 3% | 3% | 7% | 8% | 0% | 0% | 0% | 0% | 1% |
| Adj. Flow (vph) | 223 | 514 | 37 | 216 | 465 | 17 | 15 | 48 | 26 | 16 | 80 | 86 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 774 | 0 | 0 | 698 | 0 | 0 | 89 | 0 | 0 | 182 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 3.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Split | NA | | Split | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 3 | 3 | | | 2 | | | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Minimum Split (s) | 22.0 | 22.0 | | 10.0 | 10.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (s) | 24.0 | 24.0 | | 23.0 | 23.0 | | 13.0 | 13.0 | | 13.0 | 13.0 | |
| Total Split (%) | 40.0% | 40.0% | | 38.3% | 38.3% | | 21.7% | 21.7% | | 21.7% | 21.7% | |
| Maximum Green (s) | 18.0 | 18.0 | | 17.0 | 17.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | Lead | Lead | | Lag | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 18.0 | | | 17.0 | | | 8.0 | | | 8.0 | |
| Actuated g/C Ratio | | 0.30 | | | 0.28 | | | 0.13 | | | 0.13 | |
| v/c Ratio | | 0.80 | | | 0.77 | | | 0.24 | | | 0.48 | |
| Control Delay | | 27.0 | | | 26.8 | | | 25.2 | | | 28.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 27.0 | | | 26.8 | | | 25.2 | | | 28.8 | |
| LOS | | C | | | C | | | C | | | C | |
| Approach Delay | | 27.0 | | | 26.8 | | | 25.2 | | | 28.8 | |

Lanes, Volumes, Timings

2: Av. Guarani & Av. Imperatriz D. Teresa Cristina

21/11/2019

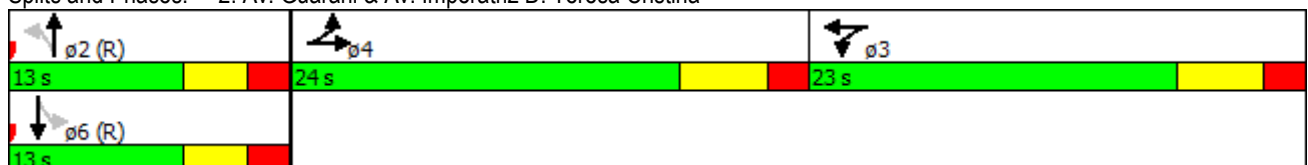


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| Approach LOS | | C | | | C | | | C | | | C | |
| Stops (vph) | | 575 | | | 521 | | | 67 | | | 142 | |
| Fuel Used(l) | | 39 | | | 45 | | | 4 | | | 8 | |
| CO Emissions (g/hr) | | 719 | | | 846 | | | 67 | | | 153 | |
| NOx Emissions (g/hr) | | 139 | | | 163 | | | 13 | | | 30 | |
| VOC Emissions (g/hr) | | 166 | | | 195 | | | 16 | | | 35 | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | 0 | | | 0 | |
| Queue Length 50th (m) | | 42.8 | | | 38.6 | | | 4.9 | | | 10.4 | |
| Queue Length 95th (m) | | #59.9 | | | 54.1 | | | 10.4 | | | 18.6 | |
| Internal Link Dist (m) | | 77.9 | | | 63.4 | | | 62.2 | | | 77.8 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 973 | | | 907 | | | 366 | | | 378 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.80 | | | 0.77 | | | 0.24 | | | 0.48 | |

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 43 (72%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 27.1 Intersection LOS: C
 Intersection Capacity Utilization 62.0% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Av. Guarani & Av. Imperatriz D. Teresa Cristina



Lanes, Volumes, Timings
3: Av. Princesa D'Oeste

21/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1875 | 123 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 0% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | 0.991 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 4774 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 143.7 | | | 132.8 | 283.4 | |
| Travel Time (s) | 10.3 | | | 9.6 | 20.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 2047 | 134 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 2181 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Sign Control | Stop | | | Stop | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 40.3% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 423 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 | 1269 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 10% | | | 10% | |
| Lane Util. Factor | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Frt | | 0.988 | | | | | | | | | | |
| Flt Protected | | | | | | | | | | | 0.984 | |
| Satd. Flow (prot) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Flt Permitted | | | | | | | | | | | 0.984 | |
| Satd. Flow (perm) | 0 | 3314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4595 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 59.9 | | | 31.7 | | | 22.0 | | | 45.2 | |
| Travel Time (s) | | 4.3 | | | 2.3 | | | 1.6 | | | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 1% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 462 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 666 | 1386 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 503 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2052 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | Perm | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | 6 | | |
| Minimum Split (s) | | 23.0 | | | | | | | | 21.0 | 21.0 | |
| Total Split (s) | | 29.0 | | | | | | | | 61.0 | 61.0 | |
| Total Split (%) | | 32.2% | | | | | | | | 67.8% | 67.8% | |
| Maximum Green (s) | | 22.0 | | | | | | | | 56.0 | 56.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | 0 | 0 | |
| Act Effct Green (s) | | 22.0 | | | | | | | | | 56.0 | |
| Actuated g/C Ratio | | 0.24 | | | | | | | | | 0.62 | |
| v/c Ratio | | 0.62 | | | | | | | | | 0.72 | |
| Control Delay | | 34.2 | | | | | | | | | 1.9 | |
| Queue Delay | | 0.0 | | | | | | | | | 5.8 | |
| Total Delay | | 34.2 | | | | | | | | | 7.7 | |
| LOS | | C | | | | | | | | | A | |
| Approach Delay | | 34.2 | | | | | | | | | 7.7 | |

Lanes, Volumes, Timings

4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Approach LOS | | C | | | | | | | | | | A |
| Stops (vph) | | 379 | | | | | | | | | | 557 |
| Fuel Used(l) | | 23 | | | | | | | | | | 23 |
| CO Emissions (g/hr) | | 419 | | | | | | | | | | 423 |
| NOx Emissions (g/hr) | | 81 | | | | | | | | | | 82 |
| VOC Emissions (g/hr) | | 97 | | | | | | | | | | 98 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 43.0 | | | | | | | | | | 1.5 |
| Queue Length 95th (m) | | 57.5 | | | | | | | | | | 3.3 |
| Internal Link Dist (m) | | 35.9 | | | | 7.7 | | 0.1 | | | | 21.2 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 810 | | | | | | | | | | 2859 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 753 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 552 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.62 | | | | | | | | | | 0.97 |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 5 (6%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.72 |
| Intersection Signal Delay: | 12.9 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 57.3% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 4: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva/Rua Conde D'Eu



Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↑↑ | | | | | | | | | ↑↑↑ | |
| Volume (vph) | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1879 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 0% | | | 0% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 |
| Frt | | | | | | | | | | | 0.953 | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4717 | 0 |
| Right Turn on Red | | | No | | | No | | | No | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 71.4 | | | 36.6 | | | 45.2 | | | 68.4 | |
| Travel Time (s) | | 5.1 | | | 2.6 | | | 3.3 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 2% |
| Adj. Flow (vph) | 0 | 442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2052 | 931 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2983 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | | | | | | | NA | |
| Protected Phases | | 4 | | | | | | | | | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Minimum Split (s) | | 23.0 | | | | | | | | | 21.0 | |
| Total Split (s) | | 23.0 | | | | | | | | | 67.0 | |
| Total Split (%) | | 25.6% | | | | | | | | | 74.4% | |
| Maximum Green (s) | | 16.0 | | | | | | | | | 62.0 | |
| Yellow Time (s) | | 4.0 | | | | | | | | | 4.0 | |
| All-Red Time (s) | | 3.0 | | | | | | | | | 1.0 | |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | 0.0 | |
| Total Lost Time (s) | | 7.0 | | | | | | | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | | | | | | | 5.0 | |
| Flash Dont Walk (s) | | 11.0 | | | | | | | | | 11.0 | |
| Pedestrian Calls (#/hr) | | 0 | | | | | | | | | 0 | |
| Act Effct Green (s) | | 16.0 | | | | | | | | | 62.0 | |
| Actuated g/C Ratio | | 0.18 | | | | | | | | | 0.69 | |
| v/c Ratio | | 0.75 | | | | | | | | | 0.92 | |
| Control Delay | | 44.1 | | | | | | | | | 11.8 | |
| Queue Delay | | 0.0 | | | | | | | | | 3.2 | |
| Total Delay | | 44.1 | | | | | | | | | 14.9 | |
| LOS | | D | | | | | | | | | B | |
| Approach Delay | | 44.1 | | | | | | | | | 14.9 | |

Lanes, Volumes, Timings

5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|------|-----|-----|-----|------|-----|------|-----|------|-----|-------|
| Approach LOS | | D | | | | | | | | | | B |
| Stops (vph) | | 353 | | | | | | | | | | 2111 |
| Fuel Used(l) | | 24 | | | | | | | | | | 88 |
| CO Emissions (g/hr) | | 439 | | | | | | | | | | 1631 |
| NOx Emissions (g/hr) | | 85 | | | | | | | | | | 315 |
| VOC Emissions (g/hr) | | 101 | | | | | | | | | | 376 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 40.5 | | | | | | | | | | 176.3 |
| Queue Length 95th (m) | | 55.3 | | | | | | | | | | 46.7 |
| Internal Link Dist (m) | | 47.4 | | | | 12.6 | | 21.2 | | 44.4 | | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 590 | | | | | | | | | | 3249 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 0 | | | | | | | | | | 193 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.75 | | | | | | | | | | 0.98 |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 87 (97%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 80 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.92 |
| Intersection Signal Delay: | 18.7 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 73.2% |
| ICU Level of Service: | D |
| Analysis Period (min): | 15 |

Splits and Phases: 5: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Princesa



| Lane Group | EBR2 | SBT | SBR2 | NWT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↗ | ↑↑↑ | | ↑↑ |
| Volume (vph) | 303 | 1868 | 7 | 379 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | | | | |
| Storage Lanes | | | | |
| Taper Length (m) | | | | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 0.95 |
| Frt | 0.865 | 0.999 | | |
| Flt Protected | | | | |
| Satd. Flow (prot) | 1542 | 4960 | 0 | 3388 |
| Flt Permitted | | | | |
| Satd. Flow (perm) | 1542 | 4960 | 0 | 3388 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 132.8 | | 31.2 |
| Travel Time (s) | | 9.6 | | 2.2 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 3% | 1% | 0% | 3% |
| Adj. Flow (vph) | 331 | 2040 | 8 | 414 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 331 | 2048 | 0 | 414 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Right | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 15 | |
| Turn Type | Free | NA | | NA |
| Protected Phases | | 6 | | 8 |
| Permitted Phases | Free | | | |
| Minimum Split (s) | | 21.0 | | 21.0 |
| Total Split (s) | | 64.0 | | 26.0 |
| Total Split (%) | | 71.1% | | 28.9% |
| Maximum Green (s) | | 59.0 | | 21.0 |
| Yellow Time (s) | | 4.0 | | 4.0 |
| All-Red Time (s) | | 1.0 | | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 90.0 | 59.0 | | 21.0 |
| Actuated g/C Ratio | 1.00 | 0.66 | | 0.23 |
| v/c Ratio | 0.21 | 0.63 | | 0.52 |
| Control Delay | 0.3 | 9.4 | | 17.2 |
| Queue Delay | 0.0 | 0.2 | | 0.0 |
| Total Delay | 0.3 | 9.6 | | 17.2 |

Lanes, Volumes, Timings

6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença

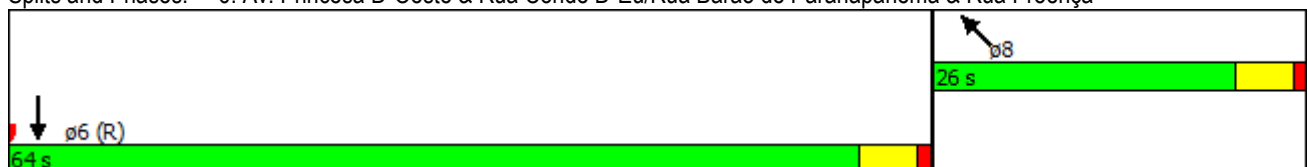


| Lane Group | EBR2 | SBT | SBR2 | NWT |
|------------------------|------|-------|------|------|
| LOS | A | A | | B |
| Approach Delay | | 9.6 | | 17.2 |
| Approach LOS | | A | | B |
| Stops (vph) | 0 | 790 | | 252 |
| Fuel Used(l) | 1 | 53 | | 11 |
| CO Emissions (g/hr) | 20 | 988 | | 214 |
| NOx Emissions (g/hr) | 4 | 191 | | 41 |
| VOC Emissions (g/hr) | 5 | 228 | | 49 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 66.7 | | 14.3 |
| Queue Length 95th (m) | 0.0 | 71.4 | | 23.4 |
| Internal Link Dist (m) | | 108.8 | | 7.2 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1542 | 3251 | | 790 |
| Starvation Cap Reductn | 0 | 0 | | 0 |
| Spillback Cap Reductn | 116 | 339 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.23 | 0.70 | | 0.52 |

Intersection Summary

| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 82 (91%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.63 |
| Intersection Signal Delay: | 9.6 |
| Intersection LOS: | A |
| Intersection Capacity Utilization: | 52.7% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

Splits and Phases: 6: Av. Princesa D'Oeste & Rua Conde D'Eu/Rua Barão de Paranapanema & Rua Proença



Lanes, Volumes, Timings
7: Av. Princesa D'Oeste

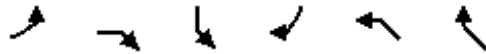
21/11/2019



| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|----------------------------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations | ↖ ↗ | | | | ↖ ↗ | | |
| Volume (vph) | 1644 | 0 | 0 | 0 | 0 | 1884 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | 4% | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 | |
| Fr _t | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | | |
| Satd. Flow (prot) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Flt Permitted | 0.950 | | | | | | |
| Satd. Flow (perm) | 3351 | 0 | 0 | 0 | 0 | 3454 | |
| Right Turn on Red | No | No | | No | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | 50 | | |
| Link Distance (m) | 23.8 | | 67.0 | | 275.9 | | |
| Travel Time (s) | 1.7 | | 4.8 | | 19.9 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% | |
| Adj. Flow (vph) | 1795 | 0 | 0 | 0 | 0 | 2057 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 1795 | 0 | 0 | 0 | 0 | 2057 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Right | |
| Median Width(m) | 6.6 | | 0.0 | | 0.0 | | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 | |
| Turn Type | Prot | | | Prot | | | |
| Protected Phases | 4 | | | | | 2 | 8 |
| Permitted Phases | | | | | | 2 | |
| Minimum Split (s) | | | | | | 22.0 | 22.0 |
| Total Split (s) | | | | | | 73.0 | 67.0 |
| Total Split (%) | 47.9% | | | | | 52.1% | 48% |
| Maximum Green (s) | | | | | | 67.0 | 61.0 |
| Yellow Time (s) | | | | | | 4.0 | 4.0 |
| All-Red Time (s) | | | | | | 2.0 | 2.0 |
| Lost Time Adjust (s) | | | | | | 0.0 | |
| Total Lost Time (s) | | | | | | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | | 0 | 0 |
| Act Effct Green (s) | | | | | | 67.0 | |
| Actuated g/C Ratio | | | | | | 0.48 | |
| v/c Ratio | | | | | | 1.25 | |
| Control Delay | | | | | | 148.6 | |
| Queue Delay | | | | | | 0.0 | |
| Total Delay | | | | | | 148.6 | |
| LOS | | | | | | F | F |
| Approach Delay | | | | | | 145.6 | |

Lanes, Volumes, Timings
 7: Av. Princesa D'Oeste

21/11/2019

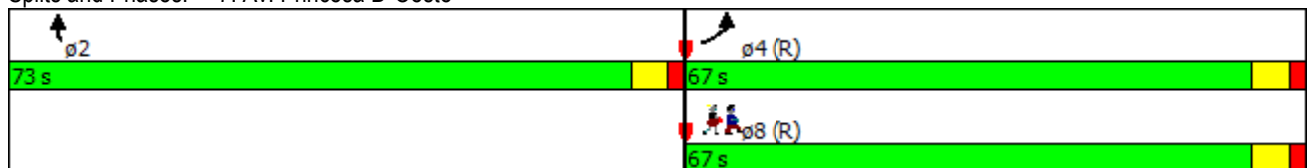


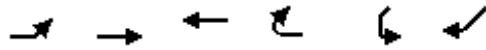
| Lane Group | EBL | EBR | SBL | SBR | NWL | NWR | ø8 |
|------------------------|--------|-----|------|--------|-------|-----|----|
| Approach LOS | F | | | | | | |
| Stops (vph) | 1280 | | | 1449 | | | |
| Fuel Used(l) | 206 | | | 313 | | | |
| CO Emissions (g/hr) | 3834 | | | 5828 | | | |
| NOx Emissions (g/hr) | 740 | | | 1125 | | | |
| VOC Emissions (g/hr) | 884 | | | 1344 | | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | | |
| Queue Length 50th (m) | ~331.9 | | | ~326.3 | | | |
| Queue Length 95th (m) | #355.0 | | | #342.5 | | | |
| Internal Link Dist (m) | 0.1 | | 43.0 | | 251.9 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 1460 | | | 1652 | | | |
| Starvation Cap Reductn | 0 | | | 0 | | | |
| Spillback Cap Reductn | 309 | | | 0 | | | |
| Storage Cap Reductn | 0 | | | 0 | | | |
| Reduced v/c Ratio | 1.56 | | | 1.25 | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 94 (67%), Referenced to phase 4:EBL and 8:Ped, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.25
 Intersection Signal Delay: 147.2 Intersection LOS: F
 Intersection Capacity Utilization 96.3% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 7: Av. Princesa D'Oeste





| Lane Group | EBL | EBT | WBT | WBR | SWL | SWR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 405 | 461 | 0 | 0 | 0 | 853 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1659 | 1747 | 0 | 0 | 0 | 2613 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 91.2 | 59.9 | | 71.4 | |
| Travel Time (s) | | 6.6 | 4.3 | | 5.1 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Adj. Flow (vph) | 442 | 503 | 0 | 0 | 0 | 931 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 442 | 503 | 0 | 0 | 0 | 931 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.0 | 3.3 | | 3.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 31.7% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

11: Av. Claudio Celestino Toledo Soares & Av. Imperatriz D. Teresa Cristina

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Volume (vph) | 159 | 241 | 15 | 112 | 304 | 38 | 11 | 166 | 163 | 15 | 284 | 362 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 13% | | | 13% | | | 6% | | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.995 | | | 0.989 | | | 0.935 | | | 0.926 | |
| Flt Protected | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (prot) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Flt Permitted | | 0.981 | | | 0.988 | | | 0.998 | | | 0.999 | |
| Satd. Flow (perm) | 0 | 1643 | 0 | 0 | 1663 | 0 | 0 | 1649 | 0 | 0 | 1616 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 281.3 | | | 122.7 | | | 120.4 | | | 125.1 | |
| Travel Time (s) | | 20.3 | | | 8.8 | | | 8.7 | | | 9.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 1% | 3% | 10% | 0% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 174 | 263 | 16 | 122 | 332 | 41 | 12 | 181 | 178 | 16 | 310 | 395 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 453 | 0 | 0 | 495 | 0 | 0 | 371 | 0 | 0 | 721 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.0 | | | 0.0 | | | 2.5 | | | 4.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Sign Control | | Yield | | | Yield | | | Yield | | | Yield | |

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 82.6%

ICU Level of Service E

Analysis Period (min) 15

Lanes, Volumes, Timings

16: Av. Claudio Celestino Toledo Soares & Rua Me Maria Santa Margarida

21/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 581 | 869 | 647 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 4.8 | 4.8 | 3.3 | 3.3 |
| Grade (%) | 0% | | 5% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.865 | 0.936 | |
| Flt Protected | | | | | 0.972 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 1816 | 3228 | 0 |
| Flt Permitted | | | | | 0.972 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 1816 | 3228 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 32.5 | | 133.3 | | 40.3 | |
| Travel Time (s) | 2.3 | | 9.6 | | 2.9 | |
| Confl. Peds. (#/hr) | | | | | 452 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 634 | 949 | 706 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 634 | 1655 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 4.0 | | 6.6 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 0.88 | 0.88 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Stop | | Stop | | Free | |

Intersection Summary

| | |
|-----------------------------------|--------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 46.3% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrad



| Lane Group | WBL2 | SBT | SBR2 | NET |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | ↘↘ | ↑↑↑↑ | | ↑↑↑↑ |
| Volume (vph) | 323 | 2802 | 69 | 1141 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | | 10% |
| Lane Util. Factor | 0.97 | 0.91 | 0.91 | 0.91 |
| Frt | | 0.996 | | |
| Flt Protected | 0.950 | | | |
| Satd. Flow (prot) | 3351 | 4846 | 0 | 4716 |
| Flt Permitted | 0.950 | | | |
| Satd. Flow (perm) | 3351 | 4846 | 0 | 4716 |
| Right Turn on Red | No | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | | 50 | | 50 |
| Link Distance (m) | | 204.5 | | 63.1 |
| Travel Time (s) | | 14.7 | | 4.5 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 353 | 3060 | 75 | 1246 |
| Shared Lane Traffic (%) | | | | |
| Lane Group Flow (vph) | 353 | 3135 | 0 | 1246 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left |
| Median Width(m) | | 0.0 | | 0.0 |
| Link Offset(m) | | 0.0 | | 0.0 |
| Crosswalk Width(m) | | 6.0 | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.07 | 1.07 | 1.12 |
| Turning Speed (k/h) | 25 | | 15 | |
| Turn Type | Prot | NA | | NA |
| Protected Phases | 8 | 6 | | 4 |
| Permitted Phases | | | | |
| Minimum Split (s) | 8.0 | 22.0 | | 21.0 |
| Total Split (s) | 43.0 | 97.0 | | 43.0 |
| Total Split (%) | 30.7% | 69.3% | | 30.7% |
| Maximum Green (s) | 39.0 | 91.0 | | 38.0 |
| Yellow Time (s) | 3.0 | 4.0 | | 3.0 |
| All-Red Time (s) | 1.0 | 2.0 | | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 4.0 | 6.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | | 5.0 | | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | 0 |
| Act Effct Green (s) | 39.0 | 91.0 | | 38.0 |
| Actuated g/C Ratio | 0.28 | 0.65 | | 0.27 |
| v/c Ratio | 0.38 | 1.00 | | 0.97 |
| Control Delay | 1.0 | 39.4 | | 60.2 |
| Queue Delay | 80.3 | 10.8 | | 42.4 |
| Total Delay | 81.3 | 50.2 | | 102.6 |
| LOS | F | D | | F |
| Approach Delay | | 50.2 | | 102.6 |

Lanes, Volumes, Timings

17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade

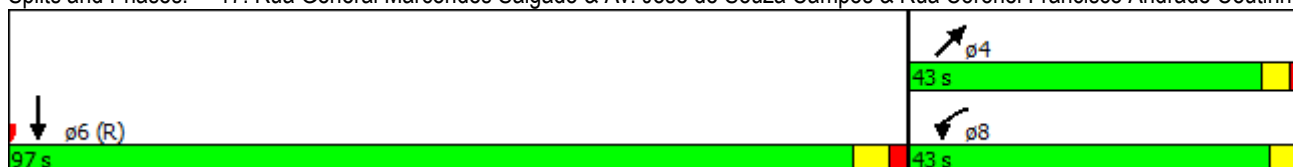


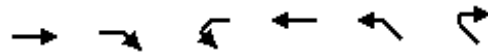
| Lane Group | WBL2 | SBT | SBR2 | NET |
|------------------------|------|-------|------|--------|
| Approach LOS | | D | | F |
| Stops (vph) | 0 | 2369 | | 1004 |
| Fuel Used(l) | 1 | 189 | | 79 |
| CO Emissions (g/hr) | 22 | 3510 | | 1473 |
| NOx Emissions (g/hr) | 4 | 677 | | 284 |
| VOC Emissions (g/hr) | 5 | 810 | | 340 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 0.0 | 310.9 | | 134.0 |
| Queue Length 95th (m) | 0.0 | 310.5 | | #155.8 |
| Internal Link Dist (m) | | 180.5 | | 39.1 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 933 | 3149 | | 1280 |
| Starvation Cap Reductn | 247 | 0 | | 443 |
| Spillback Cap Reductn | 840 | 110 | | 75 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 3.80 | 1.03 | | 1.49 |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 5 (4%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 110 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 1.00 |
| Intersection Signal Delay: | 66.3 |
| Intersection LOS: | E |
| Intersection Capacity Utilization: | 95.1% |
| ICU Level of Service: | F |
| Analysis Period (min): | 15 |
| # 95th percentile volume exceeds capacity, queue may be longer. | |
| Queue shown is maximum after two cycles. | |

Splits and Phases: 17: Rua General Marcondes Salgado & Av. José de Souza Campos & Rua Coronel Francisco Andrade Coutinho





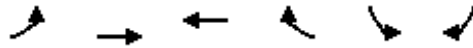
| Lane Group | EBT | EBR | WBL | WBT | NWL | NWR |
|----------------------------|-------|-------|------|-----------|-------|-------|
| Lane Configurations | ↑↑ | | | | | |
| Volume (vph) | 951 | 499 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 |
| Grade (%) | 0% | | | 0% 6% | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.948 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3243 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3243 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 50 | | |
| Link Distance (m) | 32.5 | | | 25.9 61.1 | | |
| Travel Time (s) | 2.3 | | | 1.9 4.4 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Adj. Flow (vph) | 1038 | 545 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1583 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 6.0 | | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 0.88 | 0.88 |
| Turning Speed (k/h) | 15 | | 25 | | 25 15 | |
| Sign Control | Free | | | Free Stop | | |

Intersection Summary

| | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 43.5% ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
23: Rua Proença

21/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|-------|------|------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 74 | 303 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 1783 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 96.4 | 36.4 | | 26.4 | |
| Travel Time (s) | | 6.9 | 2.6 | | 1.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 0% | 3% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 81 | 331 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 81 | 331 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Free | | Free | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.6% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings
 24: Rua Barão de Paranapanema

21/11/2019



| Lane Group | WBL | WBR | NBL | NBR | SEL | SER |
|----------------------------|------|-------|-------|-------|------|-------|
| Lane Configurations | | | | | | |
| Volume (vph) | 0 | 386 | 74 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Flt | | 0.850 | | | | |
| Flt Protected | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Flt Permitted | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 2588 | 1745 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | 50 | | 50 | |
| Link Distance (m) | 33.1 | | 26.4 | | 33.5 | |
| Travel Time (s) | 2.4 | | 1.9 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 3% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 421 | 81 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 421 | 81 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | 0.0 | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | 15 | 25 | 15 | 25 | 15 |
| Sign Control | Free | | Free | | Free | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 34.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|-------|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|
| Lane Configurations | | ↔↑ | | | | | | ↑↑↑ | | | | |
| Volume (vph) | 105 | 928 | 0 | 0 | 0 | 0 | 0 | 799 | 179 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 10% | | | 0% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 |
| Friction | | | | | | | | 0.973 | | | | |
| Flt Protected | | 0.995 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.995 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3404 | 0 | 0 | 0 | 0 | 0 | 4597 | 0 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 31.7 | | | 108.9 | | | 27.3 | | | 67.8 | |
| Travel Time (s) | | 2.3 | | | 7.8 | | | 2.0 | | | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% | 2% |
| Adj. Flow (vph) | 115 | 1013 | 0 | 0 | 0 | 0 | 0 | 872 | 195 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1128 | 0 | 0 | 0 | 0 | 0 | 1067 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | NA | | | | |
| Protected Phases | | 4 | | | | | | 2 | | | | |
| Permitted Phases | 4 | | | | | | | | | | | |
| Minimum Split (s) | 23.0 | 23.0 | | | | | | 21.0 | | | | |
| Total Split (s) | 52.0 | 52.0 | | | | | | 38.0 | | | | |
| Total Split (%) | 57.8% | 57.8% | | | | | | 42.2% | | | | |
| Maximum Green (s) | 45.0 | 45.0 | | | | | | 33.0 | | | | |
| Yellow Time (s) | 4.0 | 4.0 | | | | | | 4.0 | | | | |
| All-Red Time (s) | 3.0 | 3.0 | | | | | | 1.0 | | | | |
| Lost Time Adjust (s) | | 0.0 | | | | | | 0.0 | | | | |
| Total Lost Time (s) | | 7.0 | | | | | | 5.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | 5.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | 0 | | | | |
| Act Effct Green (s) | | 45.0 | | | | | | 33.0 | | | | |
| Actuated g/C Ratio | | 0.50 | | | | | | 0.37 | | | | |
| v/c Ratio | | 0.66 | | | | | | 0.63 | | | | |
| Control Delay | | 13.6 | | | | | | 25.6 | | | | |
| Queue Delay | | 0.0 | | | | | | 0.0 | | | | |
| Total Delay | | 13.6 | | | | | | 25.6 | | | | |
| LOS | | B | | | | | | C | | | | |
| Approach Delay | | 13.6 | | | | | | 25.6 | | | | |

Lanes, Volumes, Timings

25: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019

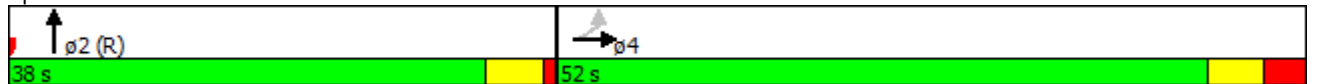


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|------------------------|-----|------|-----|-----|------|-----|-----|-----|------|-----|------|-----|--|
| Approach LOS | | B | | | | | | | C | | | | |
| Stops (vph) | | 550 | | | | | | | 736 | | | | |
| Fuel Used(l) | | 26 | | | | | | | 37 | | | | |
| CO Emissions (g/hr) | | 476 | | | | | | | 691 | | | | |
| NOx Emissions (g/hr) | | 92 | | | | | | | 133 | | | | |
| VOC Emissions (g/hr) | | 110 | | | | | | | 159 | | | | |
| Dilemma Vehicles (#) | | 0 | | | | | | | 0 | | | | |
| Queue Length 50th (m) | | 62.2 | | | | | | | 57.7 | | | | |
| Queue Length 95th (m) | | 68.1 | | | | | | | 69.3 | | | | |
| Internal Link Dist (m) | | 7.7 | | | 84.9 | | | 3.3 | | | 43.8 | | |
| Turn Bay Length (m) | | | | | | | | | | | | | |
| Base Capacity (vph) | | 1702 | | | | | | | 1685 | | | | |
| Starvation Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Spillback Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Storage Cap Reductn | | 0 | | | | | | | 0 | | | | |
| Reduced v/c Ratio | | 0.66 | | | | | | | 0.63 | | | | |

Intersection Summary

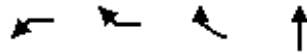
| | |
|------------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 3 (3%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 50 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.66 |
| Intersection Signal Delay: | 19.4 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 55.7% |
| ICU Level of Service: | B |
| Analysis Period (min): | 15 |

Splits and Phases: 25: Av. Princesa D'Oeste & Rua Conde D'Eu

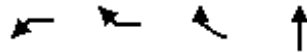


Lanes, Volumes, Timings
 26: Rua Conde D'Eu & Av. Princesa D'Oeste

21/11/2019



| Lane Group | WBL | WBR | WBR2 | NBT |
|----------------------------|-------|-------|-------|-------|
| Lane Configurations | | | | |
| Volume (vph) | 561 | 379 | 225 | 1309 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 0.91 | 0.95 | 0.91 |
| Frt | 0.956 | 0.850 | | |
| Flt Protected | 0.966 | | | |
| Satd. Flow (prot) | 3239 | 1371 | 0 | 4964 |
| Flt Permitted | 0.966 | | | |
| Satd. Flow (perm) | 3239 | 1371 | 0 | 4964 |
| Right Turn on Red | | | No | |
| Satd. Flow (RTOR) | | | | |
| Link Speed (k/h) | 50 | | | 50 |
| Link Distance (m) | 108.1 | | | 68.6 |
| Travel Time (s) | 7.8 | | | 4.9 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 1% | 3% | 2% | 1% |
| Bus Blockages (#/hr) | 0 | 3 | 0 | 0 |
| Adj. Flow (vph) | 613 | 414 | 246 | 1429 |
| Shared Lane Traffic (%) | | 62% | | |
| Lane Group Flow (vph) | 870 | 403 | 0 | 1429 |
| Enter Blocked Intersection | No | No | No | No |
| Lane Alignment | Left | Right | Right | Left |
| Median Width(m) | 6.6 | | | 0.0 |
| Link Offset(m) | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | |
| Headway Factor | 1.04 | 1.06 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 15 | |
| Turn Type | Prot | Prot | | NA |
| Protected Phases | 8 | 8 | | 2 |
| Permitted Phases | 8 | | | |
| Minimum Split (s) | 21.0 | 21.0 | | 21.0 |
| Total Split (s) | 48.0 | 48.0 | | 42.0 |
| Total Split (%) | 53.3% | 53.3% | | 46.7% |
| Maximum Green (s) | 43.0 | 43.0 | | 37.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 |
| Lead/Lag | | | | |
| Lead-Lag Optimize? | | | | |
| Walk Time (s) | 5.0 | 5.0 | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 |
| Act Effct Green (s) | 43.0 | 43.0 | | 37.0 |
| Actuated g/C Ratio | 0.48 | 0.48 | | 0.41 |
| v/c Ratio | 0.56 | 0.62 | | 0.70 |
| Control Delay | 14.9 | 18.6 | | 11.6 |
| Queue Delay | 1.5 | 2.8 | | 0.7 |
| Total Delay | 16.3 | 21.4 | | 12.3 |
| LOS | B | C | | B |
| Approach Delay | 17.9 | | | 12.3 |

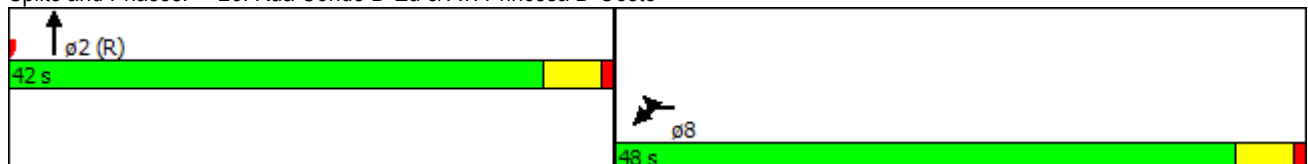


| Lane Group | WBL | WBR | WBR2 | NBT |
|------------------------|------|------|------|------|
| Approach LOS | B | | | B |
| Stops (vph) | 381 | 204 | | 888 |
| Fuel Used(l) | 25 | 13 | | 39 |
| CO Emissions (g/hr) | 465 | 245 | | 727 |
| NOx Emissions (g/hr) | 90 | 47 | | 140 |
| VOC Emissions (g/hr) | 107 | 57 | | 168 |
| Dilemma Vehicles (#) | 0 | 0 | | 0 |
| Queue Length 50th (m) | 39.2 | 39.3 | | 42.8 |
| Queue Length 95th (m) | 50.5 | 67.9 | | 47.3 |
| Internal Link Dist (m) | 84.1 | | | 44.6 |
| Turn Bay Length (m) | | | | |
| Base Capacity (vph) | 1547 | 655 | | 2040 |
| Starvation Cap Reductn | 0 | 0 | | 281 |
| Spillback Cap Reductn | 456 | 152 | | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.80 | 0.80 | | 0.81 |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 6 (7%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.70 |
| Intersection Signal Delay: | 15.0 |
| Intersection LOS: | B |
| Intersection Capacity Utilization | 56.7% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 26: Rua Conde D'Eu & Av. Princesa D'Oeste



Lanes, Volumes, Timings
28: Av. Princesa D'Oeste

21/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|----------------------------|------|-------|-------|-------|-------|---------|------|
| Lane Configurations | | | | | ↖ ↗ | ↖ ↗ ↖ ↗ | |
| Volume (vph) | 0 | 0 | 0 | 0 | 1644 | 1998 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Grade (%) | 0% | | 4% | | | 4% | |
| Storage Length (m) | 0.0 | 0.0 | | 0.0 | 82.2 | | |
| Storage Lanes | 0 | 0 | | 0 | 2 | | |
| Taper Length (m) | 7.5 | | | | 7.5 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.91 | |
| Frt | | | | | | | |
| Flt Protected | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Flt Permitted | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3284 | 4865 | |
| Right Turn on Red | | No | | No | No | | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | 50 | | | 50 | |
| Link Distance (m) | 23.8 | | 283.4 | | | 82.2 | |
| Travel Time (s) | 1.7 | | 20.4 | | | 5.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 1% | |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 1795 | 2182 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 1795 | 2182 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Right | Left | Left | |
| Median Width(m) | 0.0 | | 0.0 | | | 0.0 | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | | |
| Turn Type | | | | | Perm | NA | |
| Protected Phases | | | | | | 6 | 10 |
| Permitted Phases | | | | | 6 | | |
| Minimum Split (s) | | | | | 22.0 | 22.0 | 8.0 |
| Total Split (s) | | | | | 82.0 | 82.0 | 8.0 |
| Total Split (%) | | | | | 91.1% | 91.1% | 9% |
| Maximum Green (s) | | | | | 76.0 | 76.0 | 3.0 |
| Yellow Time (s) | | | | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 1.0 |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | | 6.0 | 6.0 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | | | | 76.0 | 76.0 | |
| Actuated g/C Ratio | | | | | 0.84 | 0.84 | |
| v/c Ratio | | | | | 0.65 | 0.53 | |
| Control Delay | | | | | 3.7 | 2.5 | |
| Queue Delay | | | | | 6.3 | 2.1 | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT | ø10 |
|------------------------|-----|-----|-------|-----|------|------|------|
| Total Delay | | | | | 10.0 | 4.6 | |
| LOS | | | | | A | A | |
| Approach Delay | | | | | | 7.0 | |
| Approach LOS | | | | | | A | |
| Stops (vph) | | | | | 445 | 433 | |
| Fuel Used(l) | | | | | 27 | 28 | |
| CO Emissions (g/hr) | | | | | 495 | 524 | |
| NOx Emissions (g/hr) | | | | | 96 | 101 | |
| VOC Emissions (g/hr) | | | | | 114 | 121 | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | | 36.2 | 25.8 | |
| Queue Length 95th (m) | | | | | 44.0 | 29.0 | |
| Internal Link Dist (m) | 0.1 | | 259.4 | | | | 58.2 |
| Turn Bay Length (m) | | | | | 82.2 | | |
| Base Capacity (vph) | | | | | 2773 | 4108 | |
| Starvation Cap Reductn | | | | | 926 | 1719 | |
| Spillback Cap Reductn | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | | 0.97 | 0.91 | |

Intersection Summary

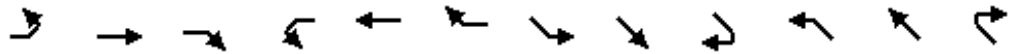
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 75 (83%), Referenced to phase 6:SBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.65 |
| Intersection Signal Delay: | 7.0 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 56.6% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

Splits and Phases: 28: Av. Princesa D'Oeste



Lanes, Volumes, Timings

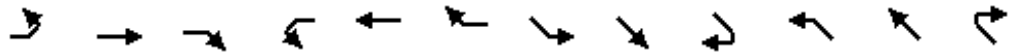
32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|------|-------|-------|------|-------|-------|------|------|-------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | | | ↑ | ↑ | ↑ |
| Volume (vph) | 0 | 2121 | 0 | 0 | 1822 | 242 | 0 | 0 | 0 | 299 | 557 | 115 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | | 0% | |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | 0.982 | | | | | | 0.997 | 0.850 |
| Flt Protected | | | | | | | | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1723 | 1483 |
| Flt Permitted | | | | | | | | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 4722 | 0 | 0 | 4613 | 0 | 0 | 0 | 0 | 1745 | 1723 | 1483 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 58.6 | | | 197.5 | | | 59.4 | | | 41.9 | |
| Travel Time (s) | | 4.2 | | | 14.2 | | | 4.3 | | | 3.0 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 4% | 0% | 2% | 2% | 2% | 0% | 1% | 0% |
| Adj. Flow (vph) | 0 | 2316 | 0 | 0 | 1990 | 264 | 0 | 0 | 0 | 326 | 608 | 126 |
| Shared Lane Traffic (%) | | | | | | | | | | | | 10% |
| Lane Group Flow (vph) | 0 | 2316 | 0 | 0 | 2254 | 0 | 0 | 0 | 0 | 326 | 621 | 113 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 3.3 | | | 3.3 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | NA | | | NA | | | | | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | | | | 2 | |
| Permitted Phases | | | | | | | | | | 2 | | 2 |
| Minimum Split (s) | | 21.0 | | | 21.0 | | | | | 21.0 | 21.0 | 21.0 |
| Total Split (s) | | 51.0 | | | 51.0 | | | | | 39.0 | 39.0 | 39.0 |
| Total Split (%) | | 56.7% | | | 56.7% | | | | | 43.3% | 43.3% | 43.3% |
| Maximum Green (s) | | 46.0 | | | 47.0 | | | | | 34.0 | 34.0 | 34.0 |
| Yellow Time (s) | | 4.0 | | | 4.0 | | | | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | | 1.0 | | | 0.0 | | | | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | | | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Act Effct Green (s) | | 46.0 | | | 47.0 | | | | | 34.0 | 34.0 | 34.0 |
| Actuated g/C Ratio | | 0.51 | | | 0.52 | | | | | 0.38 | 0.38 | 0.38 |
| v/c Ratio | | 0.96 | | | 0.94 | | | | | 0.49 | 0.96 | 0.20 |
| Control Delay | | 12.7 | | | 29.2 | | | | | 20.6 | 49.9 | 16.9 |
| Queue Delay | | 43.9 | | | 0.3 | | | | | 21.6 | 42.7 | 5.4 |
| Total Delay | | 56.7 | | | 29.5 | | | | | 42.2 | 92.6 | 22.3 |
| LOS | | E | | | C | | | | | D | F | C |
| Approach Delay | | 56.7 | | | 29.5 | | | | | | 69.6 | |

Lanes, Volumes, Timings

32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|-------|-----|-----|------|-----|------|--------|------|
| Approach LOS | | E | | | C | | | | | | | E |
| Stops (vph) | | 1363 | | | 1671 | | | | | 196 | 456 | 51 |
| Fuel Used(l) | | 62 | | | 118 | | | | | 10 | 33 | 3 |
| CO Emissions (g/hr) | | 1144 | | | 2201 | | | | | 187 | 616 | 52 |
| NOx Emissions (g/hr) | | 221 | | | 425 | | | | | 36 | 119 | 10 |
| VOC Emissions (g/hr) | | 264 | | | 508 | | | | | 43 | 142 | 12 |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Queue Length 50th (m) | | 68.0 | | | 132.7 | | | | | 33.6 | 113.2 | 12.1 |
| Queue Length 95th (m) | | m36.0 | | | 149.5 | | | | | 51.2 | #178.5 | 20.7 |
| Internal Link Dist (m) | | 34.6 | | | 173.5 | | | 35.4 | | | 17.9 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2413 | | | 2409 | | | | | 659 | 650 | 560 |
| Starvation Cap Reductn | | 699 | | | 0 | | | | | 326 | 104 | 387 |
| Spillback Cap Reductn | | 0 | | | 15 | | | | | 106 | 0 | 0 |
| Storage Cap Reductn | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Reduced v/c Ratio | | 1.35 | | | 0.94 | | | | | 0.98 | 1.14 | 0.65 |

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 80

Control Type: Pretimed

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 48.2

Intersection LOS: D

Intersection Capacity Utilization 164.5%

ICU Level of Service H

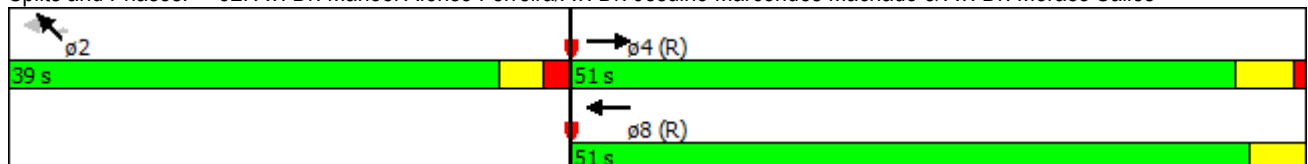
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

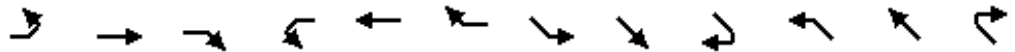
Splits and Phases: 32: Av. Dr. Manoel Afonso Ferreira/Av. Dr. Jesuino Marcondes Machado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

21/11/2019

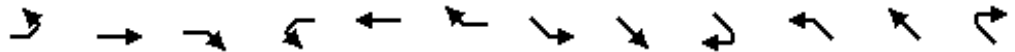


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|----------------------------|-------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Lane Configurations | | ↕↕ | | | | | | | | | ↕↕ | |
| Volume (vph) | 618 | 195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 358 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 6% | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 |
| Frt | | | | | | | | | | | 0.978 | |
| Flt Protected | | 0.963 | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 3327 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Flt Permitted | | 0.963 | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 3327 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3282 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 25.9 | | | 73.4 | | | 41.9 | | | 79.5 | |
| Travel Time (s) | | 1.9 | | | 5.3 | | | 3.0 | | | 5.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 0% |
| Adj. Flow (vph) | 675 | 213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 391 | 66 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 888 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 457 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 1.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | Perm | NA | | | | | | | | | | NA |
| Protected Phases | | 4 | | | | | | | | | | |
| Permitted Phases | 4 | | | | | | | | | | | 2 |
| Minimum Split (s) | 20.0 | 20.0 | | | | | | | | | | 21.0 |
| Total Split (s) | 55.0 | 55.0 | | | | | | | | | | 35.0 |
| Total Split (%) | 61.1% | 61.1% | | | | | | | | | | 38.9% |
| Maximum Green (s) | 51.0 | 51.0 | | | | | | | | | | 30.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | | | | | | | | 3.0 |
| All-Red Time (s) | 1.0 | 1.0 | | | | | | | | | | 2.0 |
| Lost Time Adjust (s) | | 0.0 | | | | | | | | | | 0.0 |
| Total Lost Time (s) | | 4.0 | | | | | | | | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | 5.0 | 5.0 | | | | | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | | | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | | | | | | | | 0 |
| Act Effct Green (s) | | 51.0 | | | | | | | | | | 30.0 |
| Actuated g/C Ratio | | 0.57 | | | | | | | | | | 0.33 |
| v/c Ratio | | 0.47 | | | | | | | | | | 0.42 |
| Control Delay | | 8.9 | | | | | | | | | | 24.7 |
| Queue Delay | | 0.0 | | | | | | | | | | 0.9 |
| Total Delay | | 8.9 | | | | | | | | | | 25.6 |
| LOS | | A | | | | | | | | | | C |
| Approach Delay | | 8.9 | | | | | | | | | | 25.6 |

Lanes, Volumes, Timings

33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida

21/11/2019



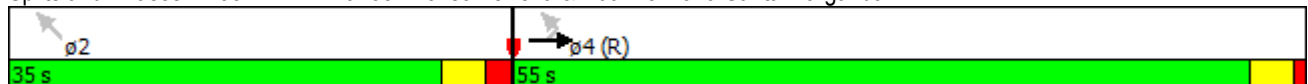
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SEL | SET | SER | NWL | NWT | NWR |
|------------------------|-----|-------|-----|-----|------|-----|-----|------|-----|-----|-----|------|
| Approach LOS | | A | | | | | | | | | | C |
| Stops (vph) | | 287 | | | | | | | | | | 296 |
| Fuel Used(l) | | 14 | | | | | | | | | | 17 |
| CO Emissions (g/hr) | | 253 | | | | | | | | | | 320 |
| NOx Emissions (g/hr) | | 49 | | | | | | | | | | 62 |
| VOC Emissions (g/hr) | | 58 | | | | | | | | | | 74 |
| Dilemma Vehicles (#) | | 0 | | | | | | | | | | 0 |
| Queue Length 50th (m) | | 31.1 | | | | | | | | | | 33.5 |
| Queue Length 95th (m) | | m33.8 | | | | | | | | | | 45.5 |
| Internal Link Dist (m) | | 1.9 | | | 49.4 | | | 17.9 | | | | 55.5 |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1885 | | | | | | | | | | 1094 |
| Starvation Cap Reductn | | 0 | | | | | | | | | | 0 |
| Spillback Cap Reductn | | 54 | | | | | | | | | | 364 |
| Storage Cap Reductn | | 0 | | | | | | | | | | 0 |
| Reduced v/c Ratio | | 0.48 | | | | | | | | | | 0.63 |

Intersection Summary

| | |
|------------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 56 (62%), Referenced to phase 4:EBTL, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.47 |
| Intersection Signal Delay: | 14.6 |
| Intersection LOS: | B |
| Intersection Capacity Utilization: | 51.2% |
| ICU Level of Service: | A |
| Analysis Period (min): | 15 |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 33: Av. Dr. Manoel Afonso Ferreira & Rua Me Maria Santa Margarida



Lanes, Volumes, Timings
37: Av. Dr. Jesuino Marcondes Machado

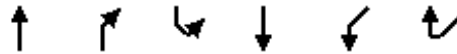
21/11/2019

| | ↑ | ↶ | ↷ | ↓ | ↶ | ↷ |
|-----------------------------------|--------------|-------|------|------------------------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | | | | ↑↑ | | ↶↷ |
| Volume (vph) | 0 | 0 | 0 | 1274 | 0 | 799 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 4% | | | 4% | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 0.88 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 3386 | 0 | 2666 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 63.3 | | | 129.4 | 59.4 | |
| Travel Time (s) | 4.6 | | | 9.3 | 4.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 2% | 1% |
| Adj. Flow (vph) | 0 | 0 | 0 | 1391 | 0 | 872 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 1391 | 0 | 872 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Free | | | Free | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 36.8% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019

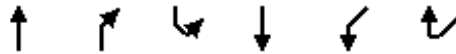


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|----------------------------|--------|-------|------|------|------|-------|------|
| Lane Configurations | ↑↑↑ | | | | | | |
| Volume (vph) | 2298 | 1230 | 0 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (m) | 3.3 | 3.3 | 3.3 | 3.3 | 4.8 | 4.8 | |
| Grade (%) | 4% | | | 4% | 0% | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 0.948 | | | | | | |
| Flt Protected | | | | | | | |
| Satd. Flow (prot) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Flt Permitted | | | | | | | |
| Satd. Flow (perm) | 4642 | 0 | 0 | 0 | 0 | 0 | |
| Right Turn on Red | | No | | | | No | |
| Satd. Flow (RTOR) | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | |
| Link Distance (m) | 67.0 | | | 63.3 | 63.4 | | |
| Travel Time (s) | 4.8 | | | 4.6 | 4.6 | | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | |
| Heavy Vehicles (%) | 0% | 1% | 2% | 2% | 2% | 2% | |
| Adj. Flow (vph) | 2509 | 1343 | 0 | 0 | 0 | 0 | |
| Shared Lane Traffic (%) | | | | | | | |
| Lane Group Flow (vph) | 3852 | 0 | 0 | 0 | 0 | 0 | |
| Enter Blocked Intersection | No | No | No | No | No | No | |
| Lane Alignment | Left | Right | Left | Left | Left | Right | |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | |
| Two way Left Turn Lane | | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 0.85 | 0.85 | |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 | |
| Turn Type | NA | | | | | | |
| Protected Phases | 2 | | | | | | 10 |
| Permitted Phases | | | | | | | |
| Minimum Split (s) | 22.0 | | | | | | 8.0 |
| Total Split (s) | 132.0 | | | | | | 8.0 |
| Total Split (%) | 94.3% | | | | | | 6% |
| Maximum Green (s) | 126.0 | | | | | | 2.0 |
| Yellow Time (s) | 4.0 | | | | | | 4.0 |
| All-Red Time (s) | 2.0 | | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | | |
| Total Lost Time (s) | 6.0 | | | | | | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Walk Time (s) | 5.0 | | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | | 0 |
| Act Effct Green (s) | 126.0 | | | | | | |
| Actuated g/C Ratio | 0.90 | | | | | | |
| v/c Ratio | 0.97dr | | | | | | |
| Control Delay | 5.8 | | | | | | |
| Queue Delay | 45.5 | | | | | | |
| Total Delay | 51.3 | | | | | | |
| LOS | D | | | | | | |

Lanes, Volumes, Timings

42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019



| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR | ø10 |
|------------------------|-------|-----|-----|------|------|-----|-----|
| Approach Delay | 51.3 | | | | | | |
| Approach LOS | D | | | | | | |
| Stops (vph) | 2052 | | | | | | |
| Fuel Used(l) | 82 | | | | | | |
| CO Emissions (g/hr) | 1530 | | | | | | |
| NOx Emissions (g/hr) | 295 | | | | | | |
| VOC Emissions (g/hr) | 353 | | | | | | |
| Dilemma Vehicles (#) | 0 | | | | | | |
| Queue Length 50th (m) | 143.5 | | | | | | |
| Queue Length 95th (m) | m76.9 | | | | | | |
| Internal Link Dist (m) | 43.0 | | | 39.3 | 39.4 | | |
| Turn Bay Length (m) | | | | | | | |
| Base Capacity (vph) | 4177 | | | | | | |
| Starvation Cap Reductn | 1323 | | | | | | |
| Spillback Cap Reductn | 715 | | | | | | |
| Storage Cap Reductn | 0 | | | | | | |
| Reduced v/c Ratio | 1.35 | | | | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 131 (94%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 51.3
 Intersection LOS: D
 Intersection Capacity Utilization 73.3%
 ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 42: Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|
| Lane Configurations | | | | | ↑↓ | ↑ | | ↑↑↑ | | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 323 | 259 | 0 | 2298 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 4% | | | 4% | | | 4% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | 0.970 | 0.850 | | | | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 3152 | 1392 | 0 | 4865 | 0 | 0 | 0 | 0 |
| Right Turn on Red | | | No | | | No | No | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | | 50 | |
| Link Distance (m) | | 32.8 | | | 69.9 | | | 63.3 | | | 39.5 | |
| Travel Time (s) | | 2.4 | | | 5.0 | | | 4.6 | | | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 1% | 2% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 353 | 283 | 0 | 2509 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | 31% | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 441 | 195 | 0 | 2509 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | | 15 | 25 | | 15 |
| Turn Type | | | | | NA | Perm | | NA | | | | |
| Protected Phases | | | | | 8 | | | 2 | | | | |
| Permitted Phases | | | | | | 8 | 2 | | | | | |
| Minimum Split (s) | | | | | 15.0 | 15.0 | 22.0 | 22.0 | | | | |
| Total Split (s) | | | | | 40.0 | 40.0 | 100.0 | 100.0 | | | | |
| Total Split (%) | | | | | 28.6% | 28.6% | 71.4% | 71.4% | | | | |
| Maximum Green (s) | | | | | 35.0 | 35.0 | 94.0 | 94.0 | | | | |
| Yellow Time (s) | | | | | 3.0 | 3.0 | 4.0 | 4.0 | | | | |
| All-Red Time (s) | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | | |
| Lost Time Adjust (s) | | | | | 0.0 | 0.0 | | 0.0 | | | | |
| Total Lost Time (s) | | | | | 5.0 | 5.0 | | 6.0 | | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Walk Time (s) | | | | | 5.0 | 5.0 | 5.0 | 5.0 | | | | |
| Flash Dont Walk (s) | | | | | 11.0 | 11.0 | 11.0 | 11.0 | | | | |
| Pedestrian Calls (#/hr) | | | | | 0 | 0 | 0 | 0 | | | | |
| Act Effct Green (s) | | | | | 35.0 | 35.0 | | 94.0 | | | | |
| Actuated g/C Ratio | | | | | 0.25 | 0.25 | | 0.67 | | | | |
| v/c Ratio | | | | | 0.56 | 0.56 | | 0.77 | | | | |
| Control Delay | | | | | 49.0 | 53.0 | | 10.9 | | | | |
| Queue Delay | | | | | 14.2 | 92.1 | | 47.1 | | | | |
| Total Delay | | | | | 63.2 | 145.1 | | 58.0 | | | | |
| LOS | | | | | E | F | | E | | | | |

Lanes, Volumes, Timings

43: Av. José de Souza Campos & Av. Dr. Moraes Salles

21/11/2019

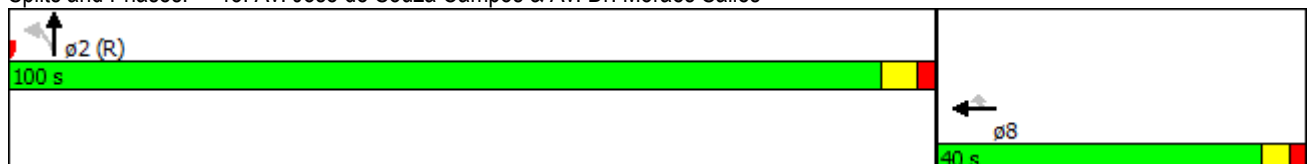


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-----|-----|-----|-----|------|------|-----|-------|-----|-----|------|-----|
| Approach Delay | | | | | 88.3 | | | 58.0 | | | | |
| Approach LOS | | | | | F | | | E | | | | |
| Stops (vph) | | | | | 328 | 146 | | 1203 | | | | |
| Fuel Used(l) | | | | | 24 | 11 | | 58 | | | | |
| CO Emissions (g/hr) | | | | | 454 | 211 | | 1087 | | | | |
| NOx Emissions (g/hr) | | | | | 88 | 41 | | 210 | | | | |
| VOC Emissions (g/hr) | | | | | 105 | 49 | | 251 | | | | |
| Dilemma Vehicles (#) | | | | | 0 | 0 | | 0 | | | | |
| Queue Length 50th (m) | | | | | 61.9 | 54.8 | | 116.8 | | | | |
| Queue Length 95th (m) | | | | | 78.1 | 81.3 | | 143.1 | | | | |
| Internal Link Dist (m) | | 8.8 | | | 45.9 | | | 39.3 | | | 15.5 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | | | | 788 | 348 | | 3266 | | | | |
| Starvation Cap Reductn | | | | | 0 | 0 | | 1105 | | | | |
| Spillback Cap Reductn | | | | | 328 | 290 | | 323 | | | | |
| Storage Cap Reductn | | | | | 0 | 0 | | 0 | | | | |
| Reduced v/c Ratio | | | | | 0.96 | 3.36 | | 1.16 | | | | |

Intersection Summary

| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 3 (2%), Referenced to phase 2:NBTL, Start of Green |
| Natural Cycle: | 55 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.77 |
| Intersection Signal Delay: | 64.1 |
| Intersection LOS: | E |
| Intersection Capacity Utilization | 73.3% |
| ICU Level of Service | D |
| Analysis Period (min) | 15 |

Splits and Phases: 43: Av. José de Souza Campos & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles

21/11/2019



| Lane Group | EBL | EBT | NEL | NET | NER |
|----------------------------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | |
| Volume (vph) | 144 | 473 | 667 | 997 | 732 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | 10% | |
| Storage Length (m) | 0.0 | | 12.0 | | 0.0 |
| Storage Lanes | 1 | | 1 | | 0 |
| Taper Length (m) | 7.5 | | 7.5 | | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 0.91 | 0.91 |
| Frt | | | | 0.937 | |
| Flt Protected | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (prot) | 1572 | 3303 | 1641 | 4401 | 0 |
| Flt Permitted | 0.950 | 0.998 | 0.950 | | |
| Satd. Flow (perm) | 1572 | 3303 | 1641 | 4401 | 0 |
| Right Turn on Red | | | | | No |
| Satd. Flow (RTOR) | | | | | |
| Link Speed (k/h) | | 50 | | 50 | |
| Link Distance (m) | | 33.3 | | 218.5 | |
| Travel Time (s) | | 2.4 | | 15.7 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 2% |
| Adj. Flow (vph) | 157 | 516 | 728 | 1089 | 799 |
| Shared Lane Traffic (%) | 10% | | | | |
| Lane Group Flow (vph) | 141 | 532 | 728 | 1888 | 0 |
| Enter Blocked Intersection | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Left | Right |
| Median Width(m) | | 3.3 | | 0.0 | |
| Link Offset(m) | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | | 25 | | 15 |
| Turn Type | Perm | NA | Perm | NA | |
| Protected Phases | | 4 | | 2 | |
| Permitted Phases | 4 | | 2 | 2 | |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | |
| Total Split (s) | 40.0 | 40.0 | 100.0 | 100.0 | |
| Total Split (%) | 28.6% | 28.6% | 71.4% | 71.4% | |
| Maximum Green (s) | 36.0 | 36.0 | 96.0 | 96.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lead/Lag | | | | | |
| Lead-Lag Optimize? | | | | | |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | 0 | 0 | |
| Act Effct Green (s) | 36.0 | 36.0 | 96.0 | 96.0 | |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.69 | 0.69 | |
| v/c Ratio | 0.35 | 0.63 | 0.65 | 0.63 | |
| Control Delay | 45.4 | 49.9 | 15.8 | 13.3 | |
| Queue Delay | 107.6 | 54.3 | 0.0 | 7.2 | |



| Lane Group | EBL | EBT | NEL | NET | NER |
|------------------------|-------|-------|-------|-------|-----|
| Total Delay | 153.0 | 104.2 | 15.8 | 20.4 | |
| LOS | F | F | B | C | |
| Approach Delay | | 114.4 | | 19.1 | |
| Approach LOS | | F | | B | |
| Stops (vph) | 99 | 402 | 349 | 856 | |
| Fuel Used(l) | 7 | 28 | 29 | 70 | |
| CO Emissions (g/hr) | 128 | 525 | 533 | 1303 | |
| NOx Emissions (g/hr) | 25 | 101 | 103 | 251 | |
| VOC Emissions (g/hr) | 30 | 121 | 123 | 301 | |
| Dilemma Vehicles (#) | 0 | 0 | 0 | 0 | |
| Queue Length 50th (m) | 37.0 | 75.8 | 110.6 | 102.4 | |
| Queue Length 95th (m) | 57.6 | 93.1 | 141.6 | 109.1 | |
| Internal Link Dist (m) | | 9.3 | | 194.5 | |
| Turn Bay Length (m) | | | 12.0 | | |
| Base Capacity (vph) | 404 | 849 | 1125 | 3017 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 365 | 384 | 0 | 1090 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 3.62 | 1.14 | 0.65 | 0.98 | |

Intersection Summary

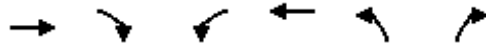
| | |
|-----------------------------------|--|
| Area Type: | Other |
| Cycle Length: | 140 |
| Actuated Cycle Length: | 140 |
| Offset: | 72 (51%), Referenced to phase 2:NETL, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.65 |
| Intersection Signal Delay: | 38.6 |
| Intersection LOS: | D |
| Intersection Capacity Utilization | 54.2% |
| ICU Level of Service | A |
| Analysis Period (min) | 15 |

Splits and Phases: 45: Rua General Marcondes Salgado & Av. Dr. Moraes Salles



Lanes, Volumes, Timings

47: Rua Barão de Paranapanema & Av. Dr. Moraes Salles/Av. Dr. Moraes Sales 21/11/2019
















| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|----------------------------|-------|-------|------|------|------|-------|
| Lane Configurations | ↑↑↑↑ | | | | | |
| Volume (vph) | 1164 | 41 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.995 | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 4894 | 0 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 39.9 | | | 40.5 | 46.1 | |
| Travel Time (s) | 2.9 | | | 2.9 | 3.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 0% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 1271 | 45 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1316 | 0 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 15 | | 25 | 25 | | 15 |
| Sign Control | Free | | | Stop | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 25.6% ICU Level of Service A |
| Analysis Period (min) | 15 |

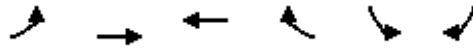
Lanes, Volumes, Timings

50: Rua General Marcondes Salgado & Retorno & Rua Coronel Francisco Andrade

| |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SEL | SER |
| Lane Configurations | | | | |  |  |  | | | |
| Volume (vph) | 0 | 0 | 0 | 0 | 7 | 62 | 667 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 6% | | 0% | | 6% | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 1.00 |
| Fr _t | | | | | | 0.850 | | | | |
| Fl _t Protected | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Fl _t Permitted | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 0 | 0 | 0 | 1747 | 1499 | 3351 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | | | 50 | | 50 | | 50 | |
| Link Distance (m) | | 49.7 | | | 55.4 | | 33.8 | | 60.8 | |
| Travel Time (s) | | 3.6 | | | 4.0 | | 2.4 | | 4.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 2% | 2% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 0 | 8 | 68 | 728 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 8 | 68 | 728 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.09 | 1.09 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 15 | 25 | 15 |
| Sign Control | | Stop | | | Stop | | Free | | Stop | |
| Intersection Summary | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | |
| Control Type: | Unsignalized | | | | | | | | | |
| Intersection Capacity Utilization | 36.9% | | | | | ICU Level of Service A | | | | |
| Analysis Period (min) | 15 | | | | | | | | | |

Lanes, Volumes, Timings
53: Av. Dr. Moraes Salles & Retorno

21/11/2019



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|------|-------|-------|-------|
| Lane Configurations | | ↑↑↑ | | | ↙ | |
| Volume (vph) | 0 | 610 | 0 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 4868 | 0 | 0 | 1745 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 40.6 | 33.3 | | 49.7 | |
| Travel Time (s) | | 2.9 | 2.4 | | 3.6 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 3% | 2% | 2% | 0% | 2% |
| Adj. Flow (vph) | 0 | 666 | 0 | 0 | 8 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 666 | 0 | 0 | 8 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 3.3 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

| Intersection Summary | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 42.9% |
| | ICU Level of Service A |
| Analysis Period (min) | 15 |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 22/10/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|----------------------------|------|-------|------|------|-------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | | | |
| Volume (vph) | 0 | 1164 | 0 | 0 | 2478 | 647 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 0.76 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Frt | | 0.850 | | | 0.969 | | | |
| Flt Protected | | | | | | | | |
| Satd. Flow (prot) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | |
| Satd. Flow (perm) | 0 | 3490 | 0 | 0 | 4724 | 0 | 0 | 0 |
| Right Turn on Red | | | | | | | | No |
| Satd. Flow (RTOR) | | | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | | 50 | |
| Link Distance (m) | 40.5 | | | 82.2 | 58.6 | | 34.3 | |
| Travel Time (s) | 2.9 | | | 5.9 | 4.2 | | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 1% | 0% | 2% | 2% |
| Adj. Flow (vph) | 0 | 1271 | 0 | 0 | 2706 | 706 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1271 | 0 | 0 | 3412 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 | 25 | 15 |
| Turn Type | | Perm | | | NA | | | |
| Protected Phases | | | | | 6 | | | |
| Permitted Phases | | 4 | | | 6 | | | |
| Minimum Split (s) | | 20.0 | | | 20.0 | | | |
| Total Split (s) | | 48.0 | | | 92.0 | | | |
| Total Split (%) | | 34.3% | | | 65.7% | | | |
| Maximum Green (s) | | 44.0 | | | 88.0 | | | |
| Yellow Time (s) | | 3.0 | | | 3.0 | | | |
| All-Red Time (s) | | 1.0 | | | 1.0 | | | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | |
| Lead/Lag | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | | |
| Flash Dont Walk (s) | | 11.0 | | | 11.0 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | | |
| Act Effct Green (s) | | 44.0 | | | 88.0 | | | |
| Actuated g/C Ratio | | 0.31 | | | 0.63 | | | |
| v/c Ratio | | 1.16 | | | 1.15 | | | |
| Control Delay | | 123.0 | | | 84.7 | | | |
| Queue Delay | | 0.0 | | | 0.0 | | | |
| Total Delay | | 123.0 | | | 84.7 | | | |
| LOS | | F | | | F | | | |
| Approach Delay | | | | | 84.7 | | | |

Lanes, Volumes, Timings

54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales 21/10/2019

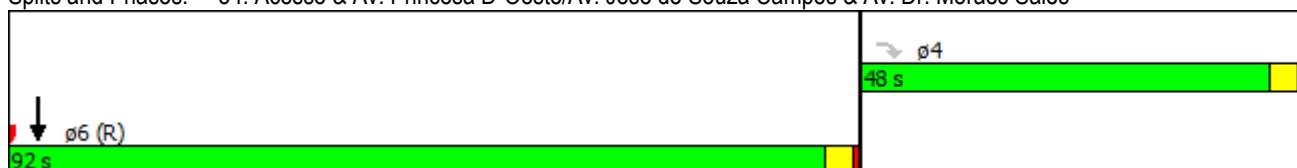


| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | NEL | NER |
|------------------------|------|--------|-----|------|--------|-----|------|-----|
| Approach LOS | | | | | F | | | |
| Stops (vph) | | 956 | | | 2314 | | | |
| Fuel Used(l) | | 130 | | | 262 | | | |
| CO Emissions (g/hr) | | 2425 | | | 4868 | | | |
| NOx Emissions (g/hr) | | 468 | | | 940 | | | |
| VOC Emissions (g/hr) | | 559 | | | 1123 | | | |
| Dilemma Vehicles (#) | | 0 | | | 0 | | | |
| Queue Length 50th (m) | | ~194.4 | | | ~424.1 | | | |
| Queue Length 95th (m) | | #219.6 | | | #419.8 | | | |
| Internal Link Dist (m) | 16.5 | | | 58.2 | 34.6 | | 10.3 | |
| Turn Bay Length (m) | | | | | | | | |
| Base Capacity (vph) | | 1096 | | | 2969 | | | |
| Starvation Cap Reductn | | 0 | | | 3 | | | |
| Spillback Cap Reductn | | 0 | | | 0 | | | |
| Storage Cap Reductn | | 0 | | | 0 | | | |
| Reduced v/c Ratio | | 1.16 | | | 1.15 | | | |

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 3 (2%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 140
 Control Type: Pretimed
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 95.1 Intersection LOS: F
 Intersection Capacity Utilization 91.7% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 54: Acesso & Av. Princesa D'Oeste/Av. José de Souza Campos & Av. Dr. Moraes Sales



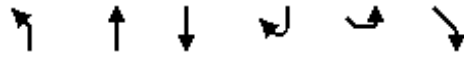
Lanes, Volumes, Timings
56: Rua Barão de Paranapanema & Acesso

21/11/2019

| | ↑ | ↗ | ↘ | ↓ | ↙ | ↖ |
|-----------------------------------|--------------|-------|------|------------------------|-------|-------|
| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
| Lane Configurations | | | | ↑ | ↘ | |
| Volume (vph) | 0 | 0 | 0 | 41 | 647 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 4.8 | 4.8 | 4.8 | 3.3 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 2153 | 1745 | 0 |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 46.2 | | | 46.1 | 34.3 | |
| Travel Time (s) | 3.3 | | | 3.3 | 2.5 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 0% | 0% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 45 | 706 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 45 | 706 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 3.3 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 0.85 | 0.85 | 0.85 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Sign Control | Stop | | | Free | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: | Unsignalized | | | | | |
| Intersection Capacity Utilization | 44.1% | | | ICU Level of Service A | | |
| Analysis Period (min) | 15 | | | | | |

Lanes, Volumes, Timings
59: Av. Princesa D'Oeste & retorno

21/11/2019



| Lane Group | NBL | NBT | SBT | SBR | SEL | SER |
|----------------------------|------|-------|------|-------|------|-------|
| Lane Configurations | | ↑↑↑ | | | | |
| Volume (vph) | 52 | 978 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 10% | 10% | | 0% | |
| Lane Util. Factor | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | 0.997 | | | | |
| Satd. Flow (prot) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Flt Permitted | | 0.997 | | | | |
| Satd. Flow (perm) | 0 | 4661 | 0 | 0 | 0 | 0 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 184.1 | 27.3 | | 32.7 | |
| Travel Time (s) | | 13.3 | 2.0 | | 2.4 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 57 | 1068 | 0 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 1125 | 0 | 0 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.12 | 1.12 | 1.12 | 1.12 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Free | Stop | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings
61: Av. Princesa D'Oeste & retorno

21/11/2019



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|----------------------------|-------|-------|-------|-------|------|------|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 0 | 0 | 0 | 0 | 1307 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | 10% | | | 10% |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1745 | 0 | 0 | 0 | 0 | 4670 |
| Link Speed (k/h) | 50 | | 50 | | | 50 |
| Link Distance (m) | 32.7 | | 141.1 | | | 22.0 |
| Travel Time (s) | 2.4 | | 10.2 | | | 1.6 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 0% | 2% | 2% | 2% | 2% | 2% |
| Adj. Flow (vph) | 57 | 0 | 0 | 0 | 0 | 1427 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 57 | 0 | 0 | 0 | 0 | 1427 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.3 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 6.0 | | 6.0 | | | 6.0 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.12 | 1.12 | 1.12 | 1.12 |
| Turning Speed (k/h) | 25 | 15 | | 15 | 25 | |
| Sign Control | Stop | | Stop | | | Free |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 49.6% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

Lanes, Volumes, Timings

62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva

21/11/2019



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↖↖ | | | ↑↑↑ | | |
| Volume (vph) | 405 | 0 | 0 | 904 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 3319 | 0 | 0 | 4916 | 0 | 0 |
| Right Turn on Red | No | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 36.6 | | | 67.8 | 68.6 | |
| Travel Time (s) | 2.6 | | | 4.9 | 4.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Adj. Flow (vph) | 442 | 0 | 0 | 987 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 442 | 0 | 0 | 987 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 6.6 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | 15 | 25 | | | 15 |
| Turn Type | Prot | | | NA | | |
| Protected Phases | 4 | | | 2 | | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 23.0 | | | 21.0 | | |
| Total Split (s) | 41.0 | | | 49.0 | | |
| Total Split (%) | 45.6% | | | 54.4% | | |
| Maximum Green (s) | 34.0 | | | 44.0 | | |
| Yellow Time (s) | 4.0 | | | 4.0 | | |
| All-Red Time (s) | 3.0 | | | 1.0 | | |
| Lost Time Adjust (s) | 0.0 | | | 0.0 | | |
| Total Lost Time (s) | 7.0 | | | 5.0 | | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | 5.0 | | |
| Flash Dont Walk (s) | 11.0 | | | 11.0 | | |
| Pedestrian Calls (#/hr) | 0 | | | 0 | | |
| Act Effct Green (s) | 34.0 | | | 44.0 | | |
| Actuated g/C Ratio | 0.38 | | | 0.49 | | |
| v/c Ratio | 0.35 | | | 0.41 | | |
| Control Delay | 0.6 | | | 3.5 | | |
| Queue Delay | 1.3 | | | 0.2 | | |
| Total Delay | 1.9 | | | 3.7 | | |
| LOS | A | | | A | | |
| Approach Delay | 1.9 | | | 3.7 | | |
| Approach LOS | A | | | A | | |
| Stops (vph) | 4 | | | 98 | | |



| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|-----|-----|------|------|-----|
| Fuel Used(l) | 2 | | | 10 | | |
| CO Emissions (g/hr) | 30 | | | 187 | | |
| NOx Emissions (g/hr) | 6 | | | 36 | | |
| VOC Emissions (g/hr) | 7 | | | 43 | | |
| Dilemma Vehicles (#) | 0 | | | 0 | | |
| Queue Length 50th (m) | 0.3 | | | 8.2 | | |
| Queue Length 95th (m) | 0.0 | | | 8.9 | | |
| Internal Link Dist (m) | 12.6 | | | 43.8 | 44.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1253 | | | 2403 | | |
| Starvation Cap Reductn | 582 | | | 592 | | |
| Spillback Cap Reductn | 0 | | | 324 | | |
| Storage Cap Reductn | 0 | | | 0 | | |
| Reduced v/c Ratio | 0.66 | | | 0.55 | | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 1 (1%), Referenced to phase 2:NBT, Start of Green |
| Natural Cycle: | 45 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.41 |
| Intersection Signal Delay: | 3.2 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 102.6% |
| ICU Level of Service | G |
| Analysis Period (min) | 15 |

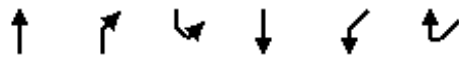
Splits and Phases: 62: Av. Princesa D'Oeste & Av. Ayrton Senna da Silva



Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019

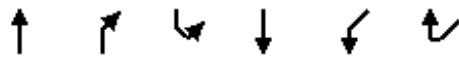


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|----------------------------|------|-------|------|-------|-------|-------|
| Lane Configurations | | | | ↑↑↑ | ↗↘ | |
| Volume (vph) | 0 | 0 | 0 | 2171 | 561 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.91 | 0.97 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Flt Permitted | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 0 | 0 | 4964 | 3351 | 0 |
| Right Turn on Red | | No | | | No | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 68.4 | | | 39.8 | 31.6 | |
| Travel Time (s) | 4.9 | | | 2.9 | 2.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 1% | 1% | 2% |
| Adj. Flow (vph) | 0 | 0 | 0 | 2371 | 613 | 0 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 2371 | 613 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 6.6 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | | | | NA | Prot | |
| Protected Phases | | | | 6 | 8 | |
| Permitted Phases | | | | | | |
| Minimum Split (s) | | | | 21.0 | 21.0 | |
| Total Split (s) | | | | 61.0 | 29.0 | |
| Total Split (%) | | | | 67.8% | 32.2% | |
| Maximum Green (s) | | | | 56.0 | 24.0 | |
| Yellow Time (s) | | | | 4.0 | 4.0 | |
| All-Red Time (s) | | | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | |
| Total Lost Time (s) | | | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | | | | 5.0 | 5.0 | |
| Flash Dont Walk (s) | | | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | | | | 0 | 0 | |
| Act Effct Green (s) | | | | 56.0 | 24.0 | |
| Actuated g/C Ratio | | | | 0.62 | 0.27 | |
| v/c Ratio | | | | 0.77 | 0.69 | |
| Control Delay | | | | 5.8 | 18.8 | |
| Queue Delay | | | | 0.4 | 1.5 | |
| Total Delay | | | | 6.2 | 20.3 | |
| LOS | | | | A | C | |
| Approach Delay | | | | 6.2 | 20.3 | |
| Approach LOS | | | | A | C | |

Lanes, Volumes, Timings

63: Av. Princesa D'Oeste & Rua Conde D'Eu

21/11/2019

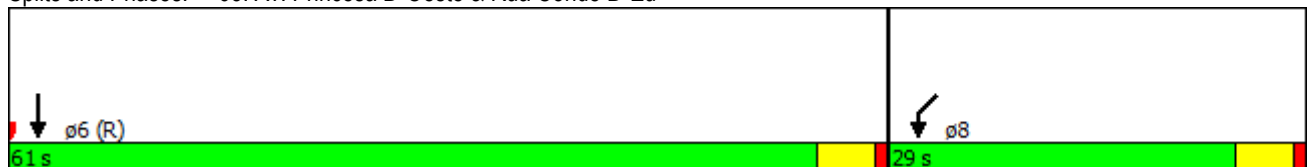


| Lane Group | NBT | NBR | SBL | SBT | SWL | SWR |
|------------------------|------|-----|-----|------|------|-----|
| Stops (vph) | | | | 1121 | 455 | |
| Fuel Used(l) | | | | 42 | 19 | |
| CO Emissions (g/hr) | | | | 784 | 363 | |
| NOx Emissions (g/hr) | | | | 151 | 70 | |
| VOC Emissions (g/hr) | | | | 181 | 84 | |
| Dilemma Vehicles (#) | | | | 0 | 0 | |
| Queue Length 50th (m) | | | | 79.2 | 47.3 | |
| Queue Length 95th (m) | | | | 40.6 | 54.7 | |
| Internal Link Dist (m) | 44.4 | | | 15.8 | 7.6 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | | | | 3088 | 893 | |
| Starvation Cap Reductn | | | | 53 | 0 | |
| Spillback Cap Reductn | | | | 248 | 132 | |
| Storage Cap Reductn | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 0.83 | 0.81 | |

Intersection Summary

| | |
|-----------------------------------|---|
| Area Type: | Other |
| Cycle Length: | 90 |
| Actuated Cycle Length: | 90 |
| Offset: | 89 (99%), Referenced to phase 6:SBT, Start of Green |
| Natural Cycle: | 60 |
| Control Type: | Pretimed |
| Maximum v/c Ratio: | 0.77 |
| Intersection Signal Delay: | 9.1 |
| Intersection LOS: | A |
| Intersection Capacity Utilization | 63.4% |
| ICU Level of Service | B |
| Analysis Period (min) | 15 |

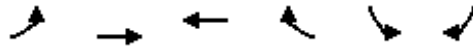
Splits and Phases: 63: Av. Princesa D'Oeste & Rua Conde D'Eu



Lanes, Volumes, Timings

64: Av. Dr. Moraes Salles & Av. Antônio A. de Camargo

21/11/2019

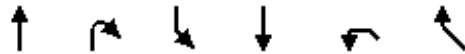


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|----------------------------|------|------|-------|-------|------|-------|
| Lane Configurations | | | ↑↑ | | | ↗ |
| Volume (vph) | 0 | 0 | 474 | 8 | 0 | 108 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 4% | 4% | | 0% | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00 |
| Frt | | | 0.997 | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 3376 | 0 | 0 | 1589 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 3376 | 0 | 0 | 1589 |
| Link Speed (k/h) | | 50 | 50 | | 50 | |
| Link Distance (m) | | 69.9 | 61.4 | | 87.7 | |
| Travel Time (s) | | 5.0 | 4.4 | | 6.3 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 2% | 1% | 0% | 2% | 0% |
| Adj. Flow (vph) | 0 | 0 | 518 | 9 | 0 | 118 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 527 | 0 | 0 | 118 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 0.0 | 0.0 | | 0.0 | |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.07 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | | 15 | 25 | 15 |
| Sign Control | | Stop | Free | | Stop | |

Intersection Summary

| | |
|-----------------------------------|------------------------|
| Area Type: | Other |
| Control Type: | Unsignalized |
| Intersection Capacity Utilization | 25.7% |
| Analysis Period (min) | 15 |
| | ICU Level of Service A |

| | ↑ | ↶ | ↷ | ↓ | ↶ | ↷ |
|----------------------------|-------|-------|------|-------|------|-------|
| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
| Lane Configurations | ↑↑ | | | | | ↶↶↶ |
| Volume (vph) | 1141 | 0 | 0 | 0 | 0 | 2557 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | 0% | | | 4% | 0% | |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 0.76 |
| Frt | | | | | | 0.850 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 3455 | 0 | 0 | 0 | 0 | 3524 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (k/h) | 50 | | | 50 | 50 | |
| Link Distance (m) | 41.0 | | | 118.6 | 39.5 | |
| Travel Time (s) | 3.0 | | | 8.5 | 2.8 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 1% | 2% | 2% | 2% | 2% | 1% |
| Adj. Flow (vph) | 1246 | 0 | 0 | 0 | 0 | 2792 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 1246 | 0 | 0 | 0 | 0 | 2792 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 0.0 | 0.0 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 6.0 | | | 6.0 | 6.0 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | | 15 | 25 | | 25 | 15 |
| Turn Type | NA | | | | | Prot |
| Protected Phases | 4 | | | | | 2 |
| Permitted Phases | | | | | | |
| Minimum Split (s) | 20.0 | | | | | 22.0 |
| Total Split (s) | 46.0 | | | | | 94.0 |
| Total Split (%) | 32.9% | | | | | 67.1% |
| Maximum Green (s) | 42.0 | | | | | 88.0 |
| Yellow Time (s) | 3.0 | | | | | 4.0 |
| All-Red Time (s) | 1.0 | | | | | 2.0 |
| Lost Time Adjust (s) | 0.0 | | | | | 0.0 |
| Total Lost Time (s) | 4.0 | | | | | 6.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Walk Time (s) | 5.0 | | | | | 5.0 |
| Flash Dont Walk (s) | 11.0 | | | | | 11.0 |
| Pedestrian Calls (#/hr) | 0 | | | | | 0 |
| Act Effct Green (s) | 42.0 | | | | | 88.0 |
| Actuated g/C Ratio | 0.30 | | | | | 0.63 |
| v/c Ratio | 1.20 | | | | | 1.26 |
| Control Delay | 105.4 | | | | | 139.9 |
| Queue Delay | 0.6 | | | | | 0.0 |
| Total Delay | 106.0 | | | | | 139.9 |
| LOS | F | | | | | F |
| Approach Delay | 106.0 | | | | | |



| Lane Group | NBT | NBR | SBL | SBT | NWL | NWR |
|------------------------|---------|-----|-----|------|------|--------|
| Approach LOS | F | | | | | |
| Stops (vph) | 636 | | | | | 1920 |
| Fuel Used(l) | 106 | | | | | 314 |
| CO Emissions (g/hr) | 1979 | | | | | 5835 |
| NOx Emissions (g/hr) | 382 | | | | | 1126 |
| VOC Emissions (g/hr) | 456 | | | | | 1346 |
| Dilemma Vehicles (#) | 0 | | | | | 0 |
| Queue Length 50th (m) | ~238.4 | | | | | ~449.7 |
| Queue Length 95th (m) | m#249.4 | | | | | #455.7 |
| Internal Link Dist (m) | 17.0 | | | 94.6 | 15.5 | |
| Turn Bay Length (m) | | | | | | |
| Base Capacity (vph) | 1036 | | | | | 2215 |
| Starvation Cap Reductn | 123 | | | | | 5 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 1.36 | | | | | 1.26 |

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 106 (76%), Referenced to phase 4:NBT, Start of Green
 Natural Cycle: 150
 Control Type: Pretimed
 Maximum v/c Ratio: 1.26
 Intersection Signal Delay: 129.5
 Intersection LOS: F
 Intersection Capacity Utilization 94.9%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 66: Av. José de Souza Campos



Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marques 21/10/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|----------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | | ↑↑ | ↑ | | ↑↑↑ | | | ↑↑ | ↑ | | |
| Volume (vph) | 0 | 1928 | 532 | 0 | 2120 | 0 | 193 | 984 | 97 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 6% | | | 6% | | | 4% | | 0% | |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 5.0 | 0.0 | 0.0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | | 2 | 1 | 0 | 0 |
| Taper Length (m) | 7.5 | | | 7.5 | | | | 7.5 | | 7.5 | |
| Lane Util. Factor | 1.00 | 0.91 | 0.91 | 1.00 | 0.91 | 1.00 | 0.95 | 0.97 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.996 | 0.850 | | | | | | 0.850 | | |
| Flt Protected | | | | | | | | 0.950 | | | |
| Satd. Flow (prot) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Flt Permitted | | | | | | | | 0.950 | | | |
| Satd. Flow (perm) | 0 | 3107 | 1351 | 0 | 4722 | 0 | 0 | 3284 | 1515 | 0 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (k/h) | | 50 | | | 50 | | | 50 | | 50 | |
| Link Distance (m) | | 145.0 | | | 58.6 | | | 63.3 | | 40.3 | |
| Travel Time (s) | | 10.4 | | | 4.2 | | | 4.6 | | 2.9 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Growth Factor | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| Heavy Vehicles (%) | 2% | 4% | 2% | 2% | 3% | 2% | 1% | 1% | 1% | 2% | 2% |
| Adj. Flow (vph) | 0 | 2105 | 581 | 0 | 2315 | 0 | 211 | 1074 | 106 | 0 | 0 |
| Shared Lane Traffic (%) | | | 10% | | | | | | | | |
| Lane Group Flow (vph) | 0 | 2163 | 523 | 0 | 2315 | 0 | 0 | 1285 | 106 | 0 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Right |
| Median Width(m) | | 4.8 | | | 4.8 | | | 6.6 | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 |
| Turning Speed (k/h) | 25 | | 15 | 25 | | 15 | 25 | 25 | 15 | 25 | 15 |
| Turn Type | | NA | Perm | | NA | | Perm | Prot | Perm | | |
| Protected Phases | | 4 | | | 8 | | | 6 | | | |
| Permitted Phases | | | 4 | | | | 6 | | 6 | | |
| Minimum Split (s) | | 21.0 | 21.0 | | 21.0 | | 21.0 | 21.0 | 21.0 | | |
| Total Split (s) | | 56.0 | 56.0 | | 56.0 | | 34.0 | 34.0 | 34.0 | | |
| Total Split (%) | | 62.2% | 62.2% | | 62.2% | | 37.8% | 37.8% | 37.8% | | |
| Maximum Green (s) | | 52.0 | 52.0 | | 51.0 | | 29.0 | 29.0 | 29.0 | | |
| Yellow Time (s) | | 4.0 | 4.0 | | 4.0 | | 3.0 | 3.0 | 3.0 | | |
| All-Red Time (s) | | 0.0 | 0.0 | | 1.0 | | 2.0 | 2.0 | 2.0 | | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | | |
| Total Lost Time (s) | | 4.0 | 4.0 | | 5.0 | | | 5.0 | 5.0 | | |
| Lead/Lag | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Walk Time (s) | | 5.0 | 5.0 | | 5.0 | | 5.0 | 5.0 | 5.0 | | |
| Flash Dont Walk (s) | | 11.0 | 11.0 | | 11.0 | | 11.0 | 11.0 | 11.0 | | |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | | 0 | 0 | 0 | | |
| Act Effct Green (s) | | 52.0 | 52.0 | | 51.0 | | 29.0 | 29.0 | 29.0 | | |
| Actuated g/C Ratio | | 0.58 | 0.58 | | 0.57 | | 0.32 | 0.32 | 0.32 | | |
| v/c Ratio | | 1.21 | 0.67 | | 0.87 | | 1.21 | 0.22 | 0.22 | | |
| Control Delay | | 119.4 | 18.5 | | 8.2 | | 134.9 | 23.7 | 23.7 | | |
| Queue Delay | | 0.6 | 0.0 | | 4.7 | | 0.2 | 0.0 | 0.0 | | |

Lanes, Volumes, Timings

70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado

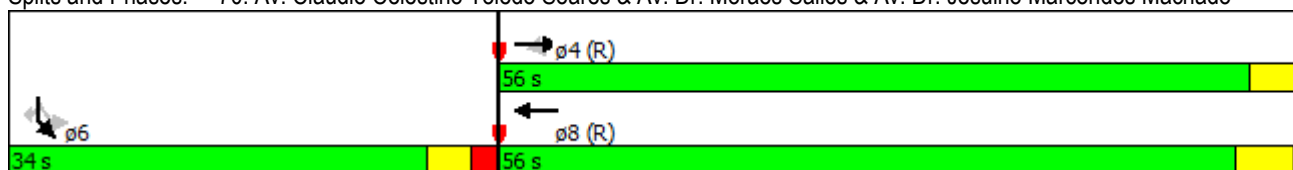


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|-----|--------|-------|-----|------|-----|------|--------|------|------|-----|
| Total Delay | | 119.9 | 18.5 | | 12.9 | | | 135.1 | 23.7 | | |
| LOS | | F | B | | B | | | F | C | | |
| Approach Delay | | 100.2 | | | 12.9 | | | 126.6 | | | |
| Approach LOS | | F | | | B | | | F | | | |
| Stops (vph) | | 1533 | 309 | | 701 | | | 923 | 66 | | |
| Fuel Used(l) | | 233 | 20 | | 40 | | | 143 | 4 | | |
| CO Emissions (g/hr) | | 4337 | 366 | | 736 | | | 2668 | 69 | | |
| NOx Emissions (g/hr) | | 837 | 71 | | 142 | | | 515 | 13 | | |
| VOC Emissions (g/hr) | | 1000 | 84 | | 170 | | | 615 | 16 | | |
| Dilemma Vehicles (#) | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Queue Length 50th (m) | | ~265.9 | 66.9 | | 30.3 | | | ~149.0 | 13.9 | | |
| Queue Length 95th (m) | | #295.3 | 101.6 | | 38.9 | | | #179.9 | 25.8 | | |
| Internal Link Dist (m) | | 121.0 | | | 34.6 | | | 39.3 | | 16.3 | |
| Turn Bay Length (m) | | | | | | | | | 5.0 | | |
| Base Capacity (vph) | | 1795 | 780 | | 2675 | | | 1058 | 488 | | |
| Starvation Cap Reductn | | 0 | 0 | | 304 | | | 0 | 0 | | |
| Spillback Cap Reductn | | 295 | 0 | | 0 | | | 41 | 0 | | |
| Storage Cap Reductn | | 0 | 0 | | 0 | | | 0 | 0 | | |
| Reduced v/c Ratio | | 1.44 | 0.67 | | 0.98 | | | 1.26 | 0.22 | | |

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Green, Master Intersection
 Natural Cycle: 130
 Control Type: Pretimed
 Maximum v/c Ratio: 1.21
 Intersection Signal Delay: 74.3
 Intersection LOS: E
 Intersection Capacity Utilization 164.5%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 70: Av. Claudio Celestino Toledo Soares & Av. Dr. Moraes Salles & Av. Dr. Jesuino Marcondes Machado





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

ESTUDO DE TRÁFEGO



EDO ROCHA ARQUITETURAS
EMPREENDIMENTO RESIDENCIAL, COMERCIAL, HOTELEIRO E SERVIÇOS
ATENDIMENTO A APRESENTAÇÃO DE SIMULAÇÃO EMDEC



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Foi apresentado, em cumprimento ao estabelecido no Protocolo EMDEC nº 2016/18/124, itens 9, 10 e 11, o Estudo de Tráfego para o cruzamento da Av. Dr. Moraes Salles x Av. Dr. Jesuíno Marcondes Machado, contemplando o Manual de Análise de Estudo de Tráfego publicado em 2018.

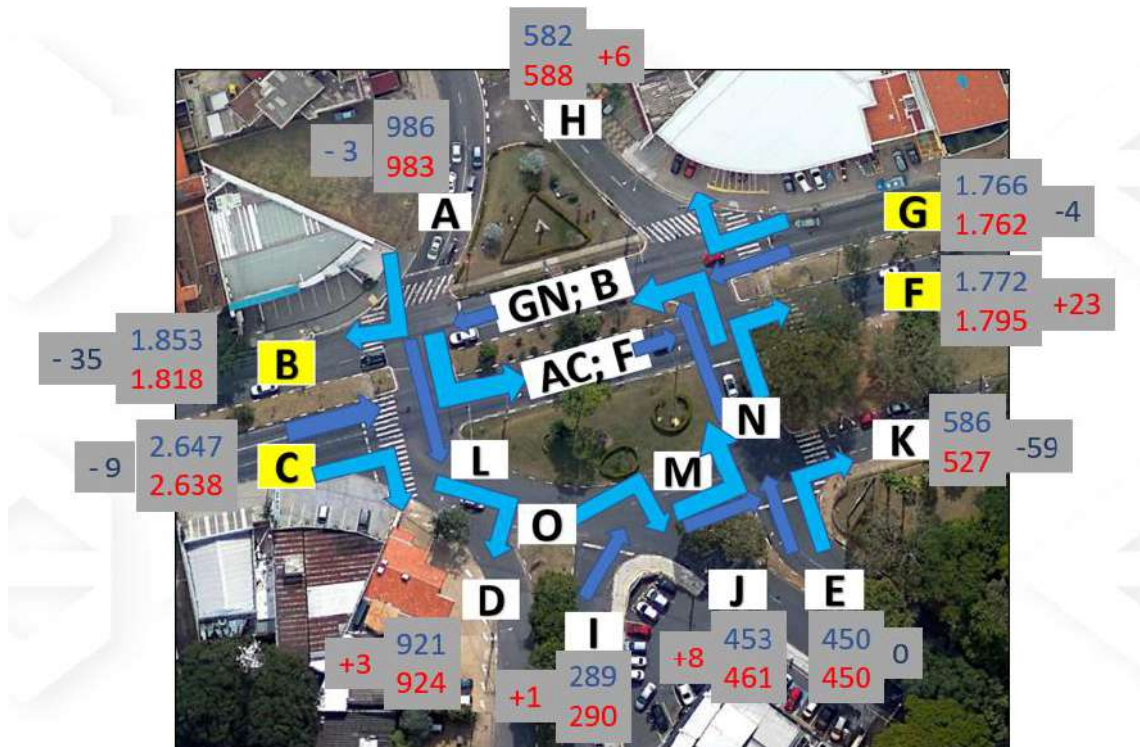
Em 17 de dezembro de 2020, foi contatado o empreendedor e apresentada simulação da Av. Moraes Salles x Av. Jesuíno Marcondes Machado elaborada pela EMDEC.

Os dados foram fornecidos e segue abaixo comparativo:

Pesquisa de out/2019



Pesquisa EMDEC nov/2020





AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Levando-se em consideração que os dados da EMDEC foram obtidos 1 ano após a pesquisa do empreendimento e considerando ainda um aumento de 2,0% no volume de tráfego no período, teríamos o seguinte volume atual com a contagem do empreendimento corrigida, para comparação:



Comparando com os volumes EMDEC, tem-se:



A maior diferença aparece na aproximação da Av. Dr. Moraes Salles, sentido Sousas.

Nas contagens realizadas em 2019, esse movimento era a soma dos movimentos 4→2 e 4→3.

No dia 22/10/2019 esse volume foi de 2077 veículos, no dia 23/10 foi de 2068 veículos e no dia 24/10 foi de 2208 veículos, portanto os volumes contados apresentaram consistência. O cruzamento foi simulado com os volumes do dia 22/10 por apresentar os maiores volumes em todas as aproximações para o pico da tarde, conforme exposto no estudo.



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Na apresentação EMDEC foram considerados os seguintes cenários:

- a) Dados de Pesquisa - Atual
- b) Dados de Pesquisa – Atual + 11%
- c) Dados de Pesquisa – Atual + 11% + 6,7% - sem empreendimento até 2025 18,4%
- d) Dados de Pesquisa – Atual + 11%+20,57% - com empreendimento até 2025 – Atual + 34%

O cenário b) Dados de Pesquisa – Atual + 11%, parece ter sido gerado a partir de estimativa de Radares e um aumento de tráfego devido a Pandemia de 11%.

É sabido que devido a atual pandemia do COVID 19, o isolamento tornou-se necessário para sua não disseminação. Este isolamento provocou redução brusca na mobilidade urbana inicialmente, até que medidas de controle e acompanhamento pudessem ser implantadas. A redução dos deslocamentos a longa distância com a utilização do trabalho e o estudo remoto tornou-se uma realidade, e diversas atividades provaram ser mais produtivas com este novo método. Voltar para os congestionamentos é uma rotina que estão todos evitando.

Portanto o cenário atual considerando um aumento de 11% no volume de tráfego, não parece ser viável, já que as próprias contagens, mesmo majoradas para o ano de 2020 provaram redução, com exceção da aproximação da Av. Dr. Moraes Salles, sentido Sousas.

O cenário c) considera, além dos 11%, um aumento de 6,7% de crescimento vegetativo dos fluxos para o ano de 2025. O crescimento parece ter sido originado pela taxa de crescimento de 1,65% ao ano. Devido ao novo cenário mundial de recessão, parece esta taxa estar consistente.

O cenário d) além dos aumentos de fluxo acima, considera aumento de 13% referente aos Polos Geradores de Viagens.

Neste item destaca-se que a simulação apresentada majora todos os fluxos de todas as aproximações. Não leva em consideração a vetorização do empreendimento e seus fluxos de entradas e saídas nas rotas. O empreendimento da Edo Rocha Arquiteturas, para o ano de 2025 gerará um incremento no volume de tráfego na hora pico da tarde de 6,7% conforme apresentado no atendimento ao Protocolo da EMDEC.

Isto exposto, o cenário d) além do empreendimento da EDO Rocha, deve estar considerando outros empreendimentos previstos para o ano em análise. No Manual EMDEC não há este tipo de previsão para a análise de viabilidade de empreendimento.

O incremento do empreendimento para o cenário de 2025 no pico da tarde é de 470 veículos, considerando todas as aproximações e todas as rotas de entradas e saídas.

O cenário c) da simulação EMDEC apresenta na somatória de suas aproximações um volume total de 7.267 veículos que adicionado ao incremento do empreendimento representaria um aumento de 6,5% para o pico da tarde.

O cenário d) já inclui o empreendimento e a participação do mesmo passa para 5,7% do volume total das aproximações.



AGESUS – Mobilidade Sustentável

Sociedade Empresarial LTDA – ME CNPJ: 18.511.688/0001-30

Isto exposto, reiteramos que o empreendimento da Edo Rocha Arquiteturas, com as medidas de: implantação de controladores semaforicos atuando em tempo real; prolongamento da Rua Geraldo de Castro Andrade até a Rua Afrânio Ferreira Júnior, com transposição do córrego para facilitar o acesso dos bairros das regiões leste e sudeste; melhoria na transposição do córrego ligando a Rua Dr. Domingos Ademar Boldrini e Rua Salim Feres, prevendo alargamento e construção de calçada de pedestres em ambos os lados, mitigam o impacto no cruzamento da Av. Dr. Moraes Salles com Av. Dr. Jesuíno Marcondes Machado e Av. Dr. Manoel Afonso Ferreira. O estudo comprova a eficiência das medidas mitigadoras apresentadas, gerando desempenho operacional com eficácia superior à dinâmica atual da referida interseção, não se justificando, portanto a necessidade de implantação da passagem em desnível, causada especificamente pelo empreendimento analisado.

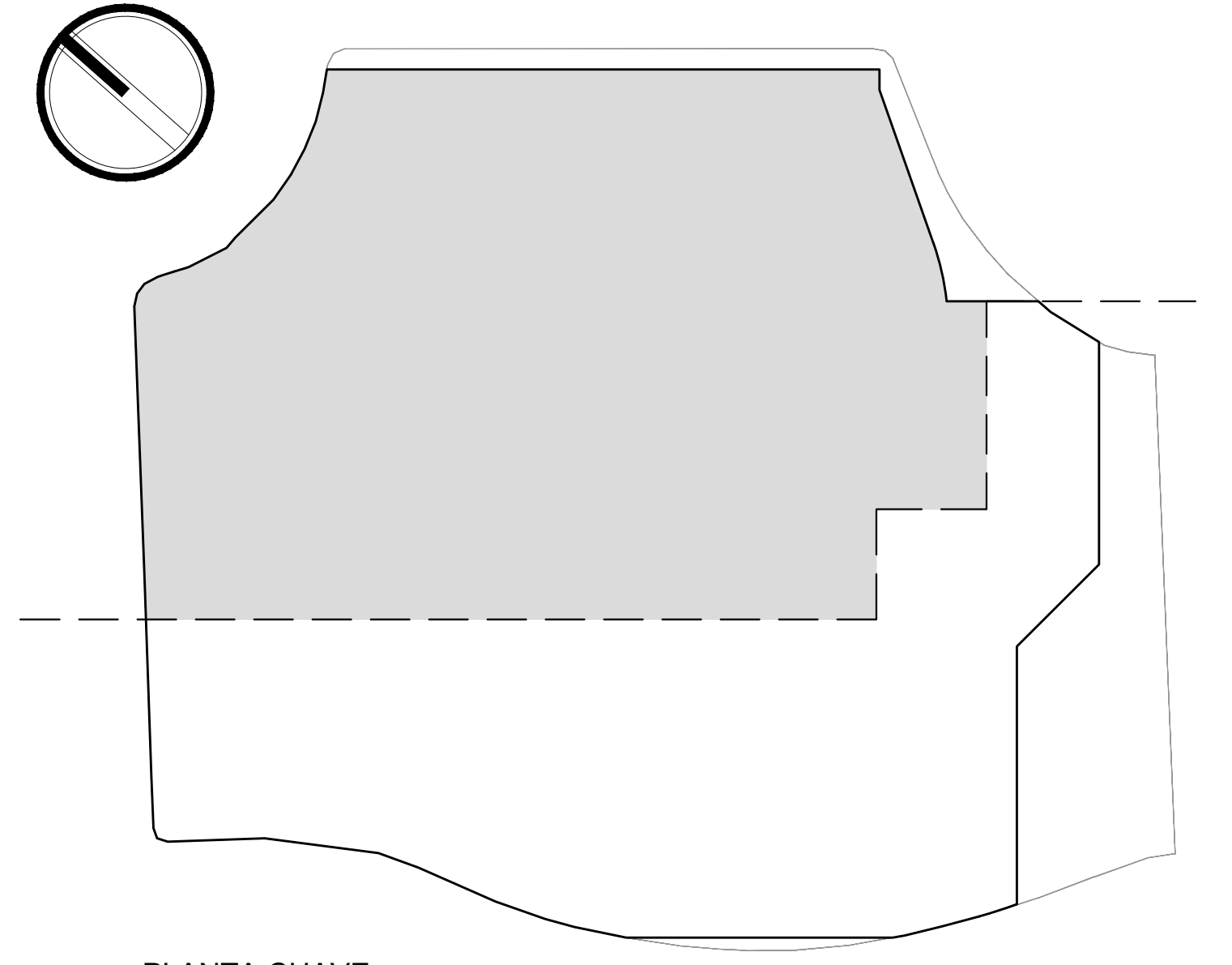
Bragança Paulista, 19 de dezembro de 2020

Elaboração:

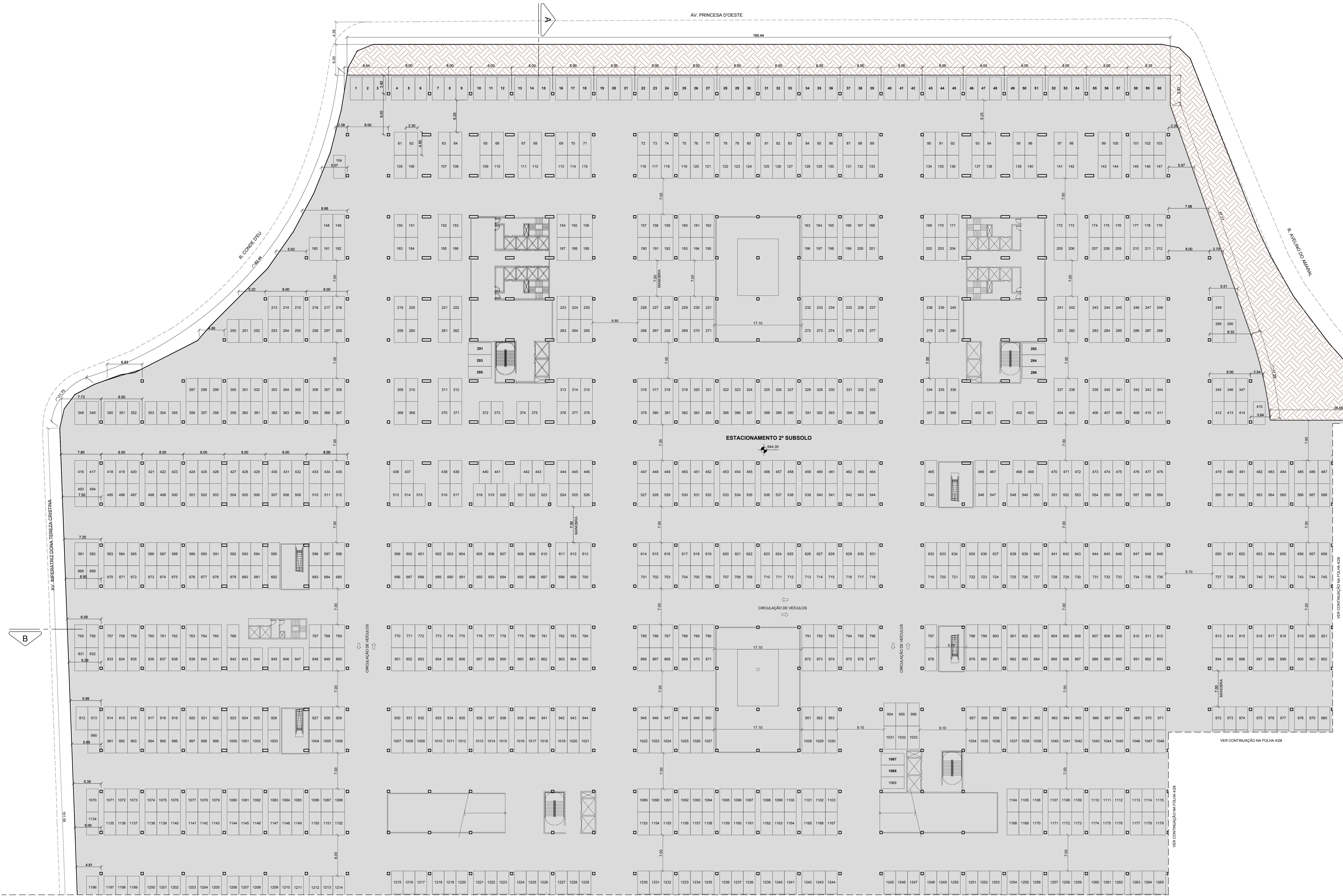
Eng. Cintia Aparecida Rossati Xavier

Coordenação Técnica:

Eng. Agenor Cremonese Júnior



PLANTA CHAVE
SEM ESCALA



| ÁREA | USO | VALOR | VALOR | VALOR | VALOR | VALOR | VALOR | VALOR | VALOR |
|------------------------|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| Área Total | | | | | | | | | |
| Área Útil | | | | | | | | | |
| Área Coberta | | | | | | | | | |
| Área de Estacionamento | | | | | | | | | |
| Área de Circulação | | | | | | | | | |
| Área de Paisagismo | | | | | | | | | |
| Área de Infraestrutura | | | | | | | | | |
| Área de Serviços | | | | | | | | | |
| Área de Manutenção | | | | | | | | | |
| Área de Segurança | | | | | | | | | |
| Área de Estacionamento | | | | | | | | | |
| Área de Circulação | | | | | | | | | |
| Área de Paisagismo | | | | | | | | | |
| Área de Infraestrutura | | | | | | | | | |
| Área de Serviços | | | | | | | | | |
| Área de Manutenção | | | | | | | | | |
| Área de Segurança | | | | | | | | | |

| UNIDADES HABITACIONAIS / RESIDENCIAL MULTIFAMILIAR | TOTAL |
|--|-------|
| CONDOMÍNIO | 10 |
| LOTE | 10 |
| QUADRA | 10 |
| TOTAL | 30 |

| COEFICIENTE DE PROFIETIVIDADE PROJETADO | COEFICIENTE DE PROFIETIVIDADE PERMITIDO |
|---|---|
| 3,80 | 4,00 |

| TAXA DE PERMEABILIDADE PROJETADA | TAXA DE PERMEABILIDADE MÍNIMA |
|----------------------------------|-------------------------------|
| 20,31% | 10,00% |

2º SUBSOLO PROJETO SIMPLIFICADO FOLHA: 2/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº 11
LOTE: 025 - LIMI QUADRA: QUARTERÃO: 1867

LOTAMENTO: ZONA: ZC4

DECLARO QUE A PROPOSTA DE PROJETO PELA PRELATERIA...
DECLARO QUE A PROPOSTA DE PROJETO PELA PRELATERIA...
DECLARO QUE A PROPOSTA DE PROJETO PELA PRELATERIA...

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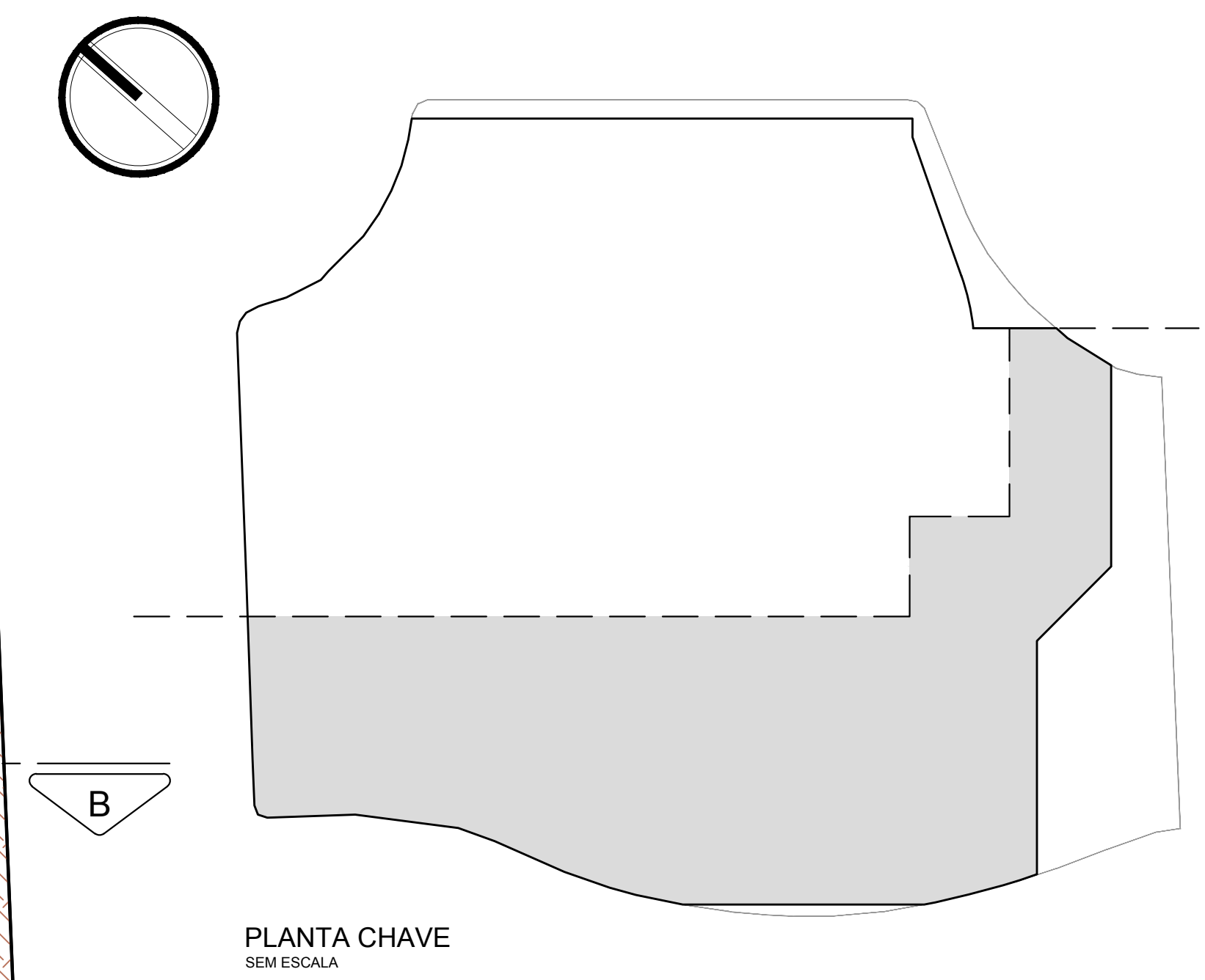
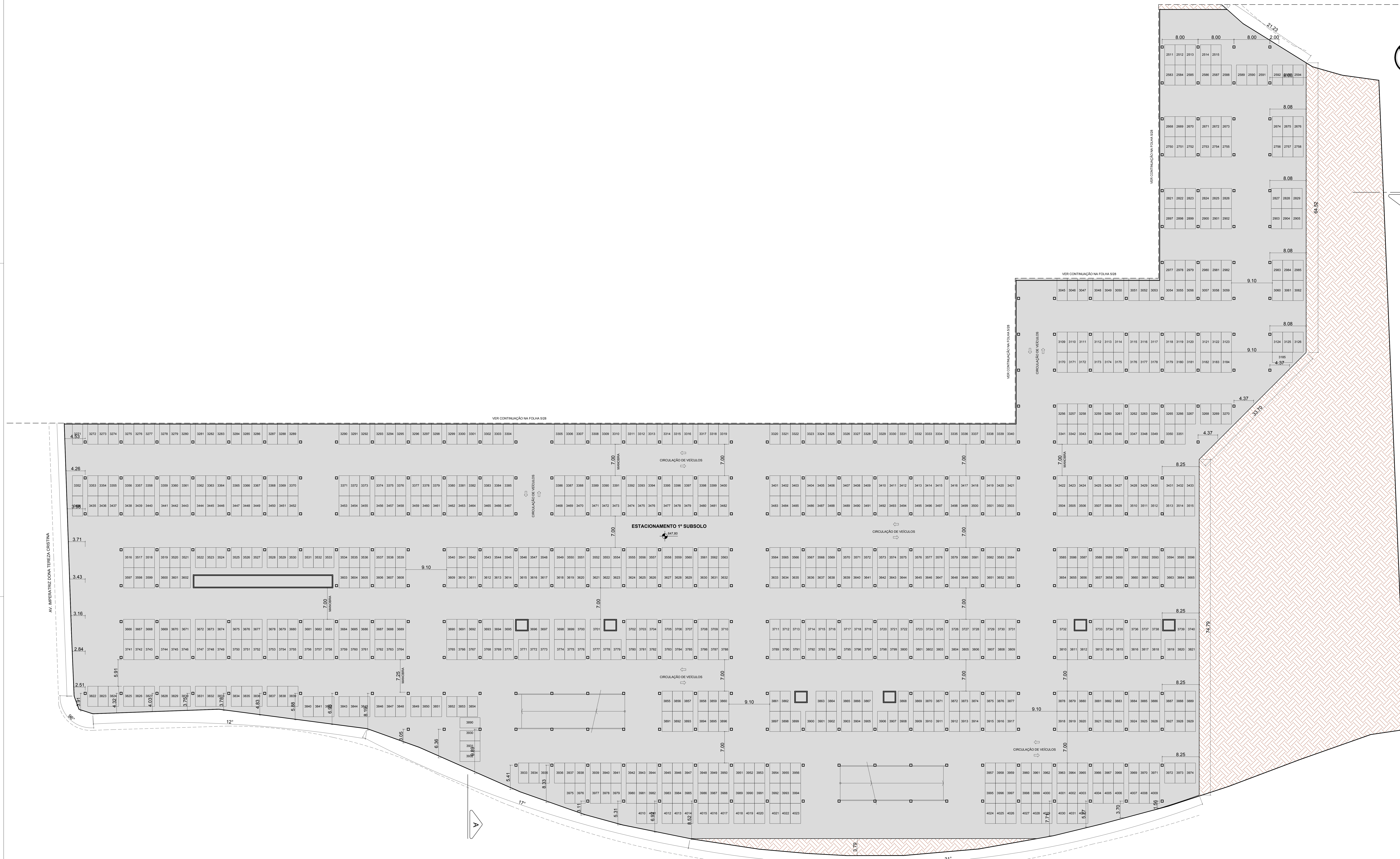
DECLARO QUE A PROPOSTA DE PROJETO PELA PRELATERIA...
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DECLARO QUE A PROPOSTA DE PROJETO PELA PRELATERIA...

2º SUBSOLO - ESTACIONAMENTO SHOPPING / COMERCIAL / HOTEL
ESCALA 1:250
ÁREA NÃO COMPUTÁVEL (2051 VAGAS) = 58.667,35m²
ATENDE A RESOLUÇÃO nº 01/20, ART. 2º, INC. II

1. O PROJETO É UM ANEXO COMPLEMENTAR DO PROJETO DE LICENCIAMENTO...
2. O ESTABELECIMENTO A SER CONSTRUÍDO É DE TIPO HABITACIONAL...
3. O PROJETO ATENDE A TODAS AS REQUISITOS...
4. A ÁREA PARA O ESTABELECIMENTO DE TIPO HABITACIONAL...
5. O PROJETO ATENDE A TODAS AS REQUISITOS...
6. O PROJETO ATENDE A TODAS AS REQUISITOS...
7. O PROJETO ATENDE A TODAS AS REQUISITOS...
8. O PROJETO ATENDE A TODAS AS REQUISITOS...
9. O PROJETO ATENDE A TODAS AS REQUISITOS...
10. O PROJETO ATENDE A TODAS AS REQUISITOS...



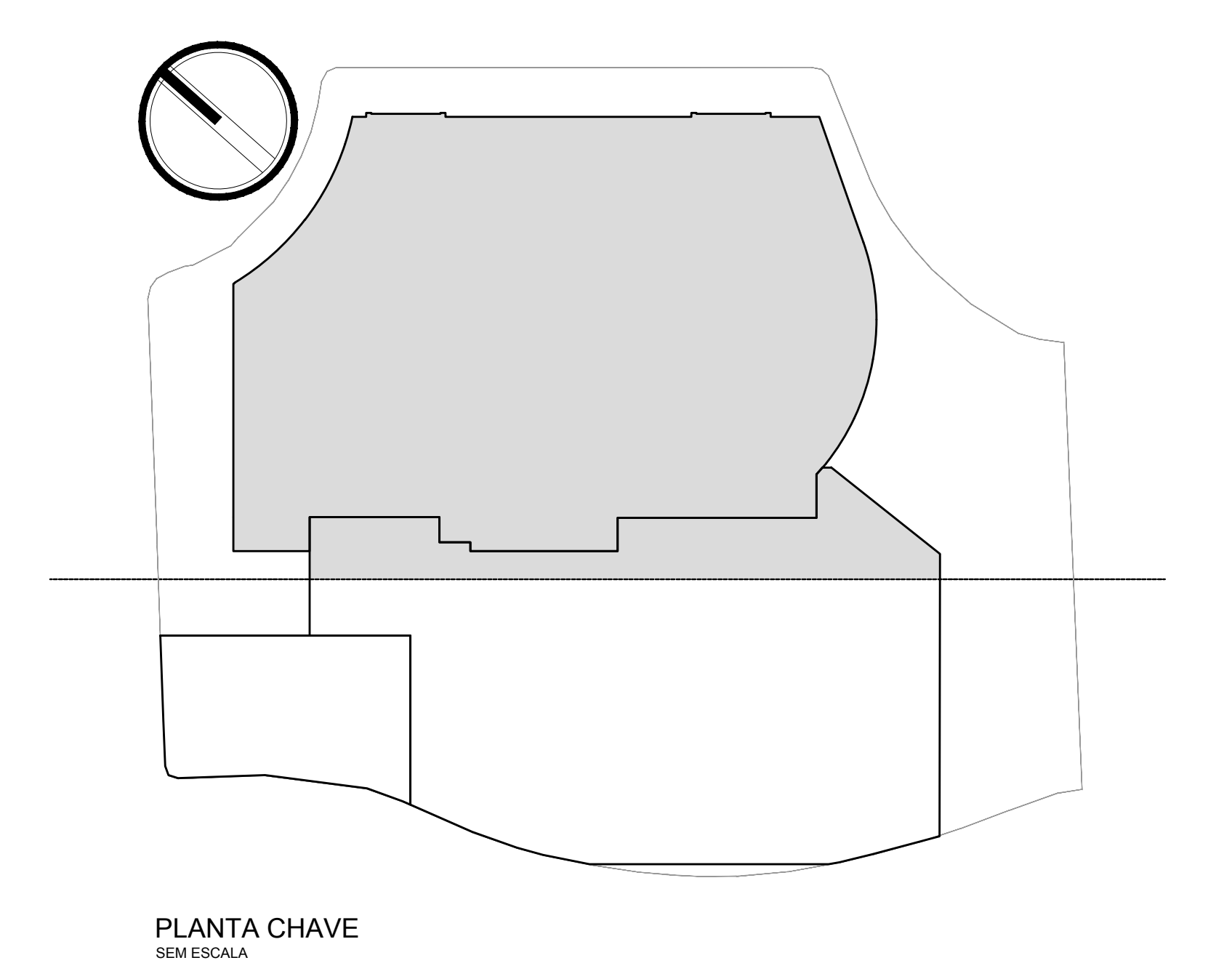
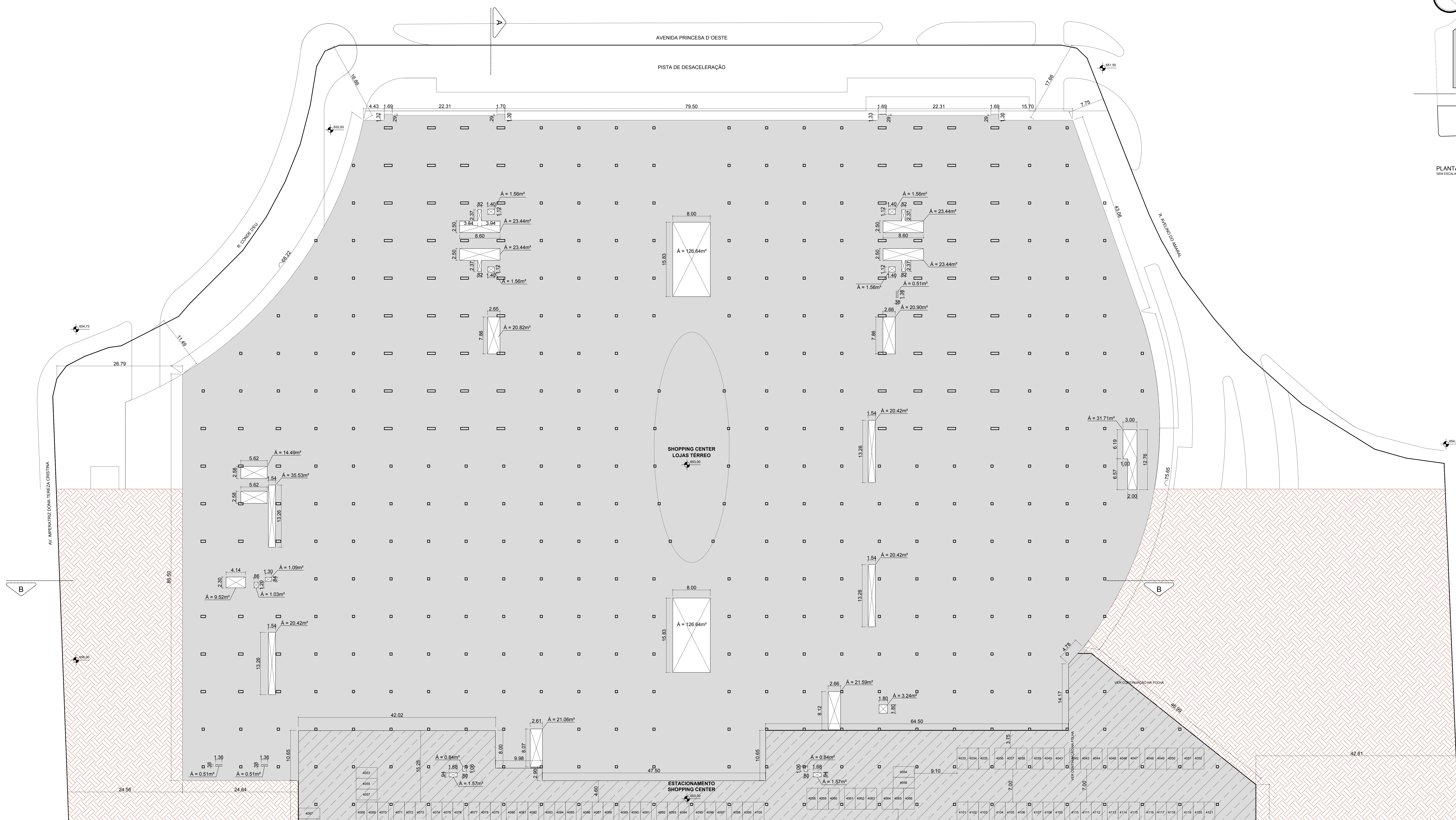
PLANTA CHAVE
SEM ESCALA

1º SUBSOLO - ESTACIONAMENTO SHOPPING / COMERCIAL / HOTEL
ESCALA 1:500

ÁREA NÃO COMPUTÁVEL (1981 VAGAS) = 58.209,38m²
ATENDE A RESOLUÇÃO nº 01/20, ART.2º, INC. II

| LOCALIZAÇÃO | | LOCAL: AV. IMPERATRIZ DONA TEZEZA CRISTINA, CAMPINAS - SP | | Nº: 11 | |
|-----------------------|--|---|--|-------------------|--|
| LOTEAMENTO | | LOTE: 025 - UNI | | QUARTERAÇÃO: 1867 | |
| ZONA: ZC4 | | | | | |
| RESERVADO PARA P.M.C. | | | | | |

1. ESTE PROJETO FORNECE INFORMAÇÕES BÁSICAS PARA O DESENVOLVIMENTO DO PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL, NÃO SE RESPONSABILIZANDO POR ERROS DE CÁLCULO OU DE EXECUÇÃO. O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL DEVE SER EXECUTADO DE ACORDO COM O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL E O PROJETO DE ENGENHARIA CIVIL DEVE SER EXECUTADO DE ACORDO COM O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL. O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL DEVE SER EXECUTADO DE ACORDO COM O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL. O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL DEVE SER EXECUTADO DE ACORDO COM O PROJETO DE ARQUITETURA E DE ENGENHARIA CIVIL.

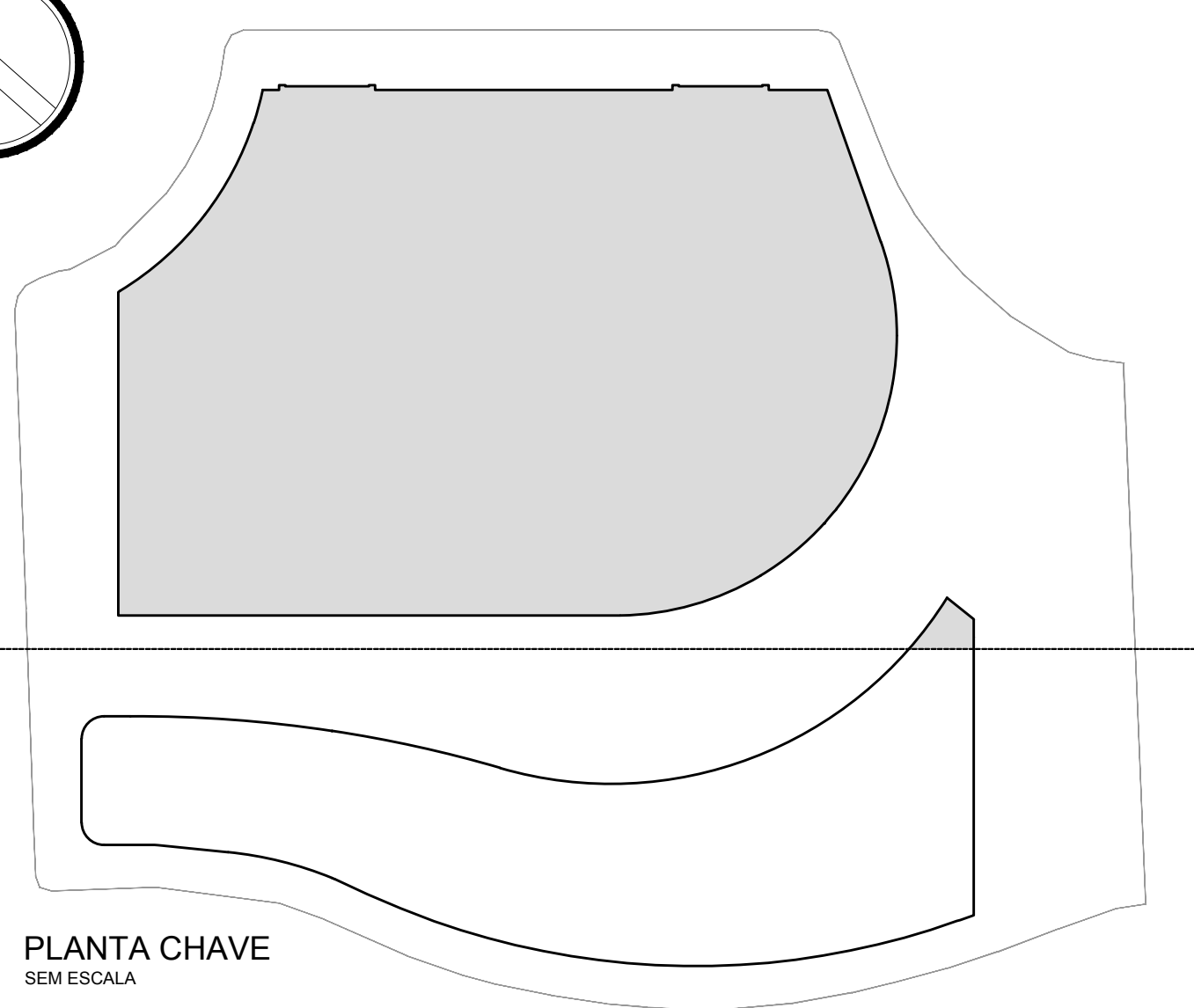
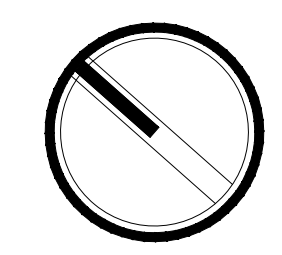


TÉRREO - SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
 ESCALA 1:200

- ÁREA COMPUTÁVEL 1 = 24 901,51m²
- ÁREA NÃO COMPUTÁVEL ESTACIONAMENTO SHOPPING CENTER (650 VAGAS) = 19 395,24m²
- ÁREA NÃO COMPUTÁVEL ESTACIONAMENTO RESIDENCIAL (108 VAGAS) = 3 759,96m²

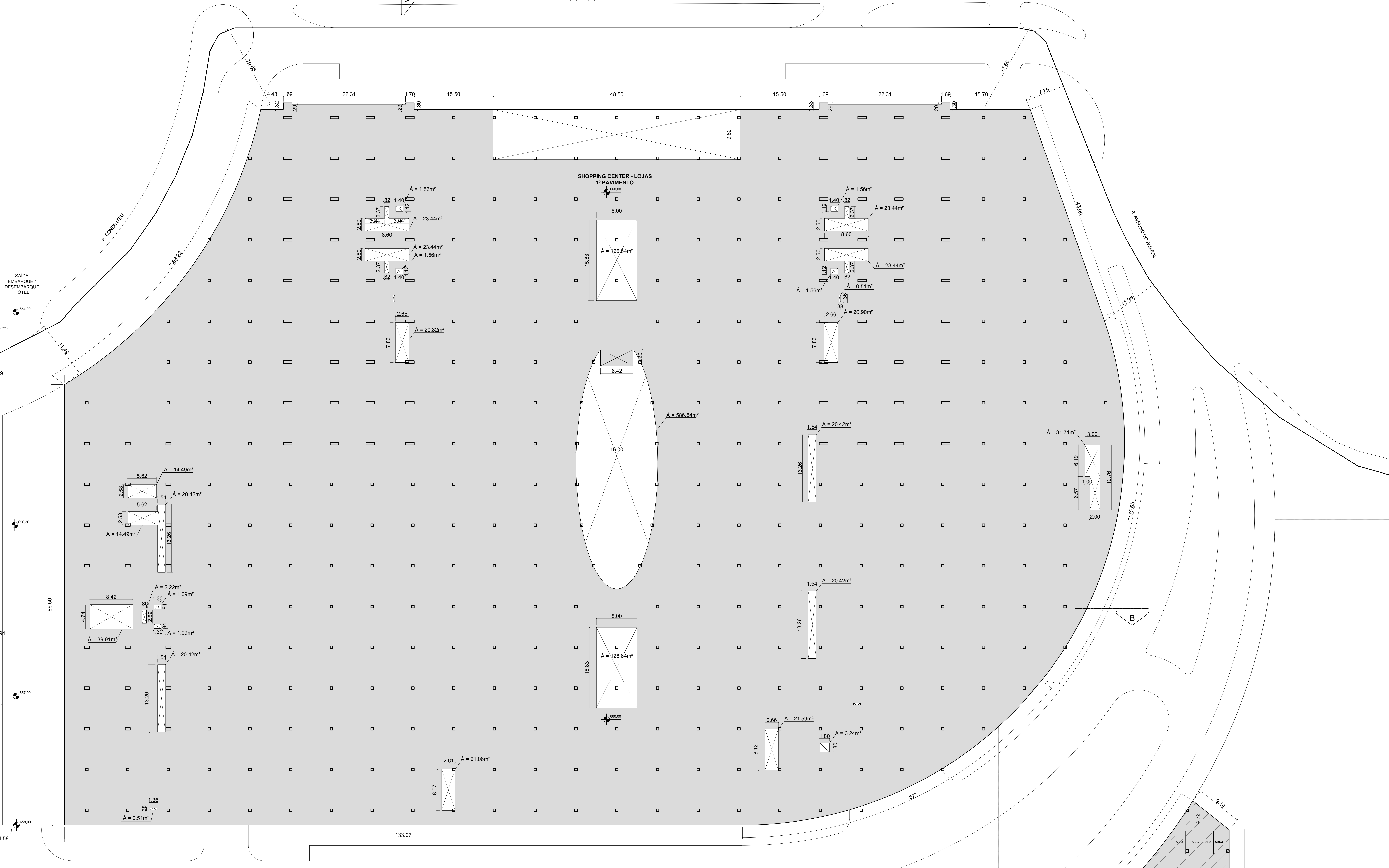
ATENDE A RESOLUÇÃO Nº 01/20, ART. 2º, INC. II

| TÉRREO - PROJETO SIMPLIFICADO | | FOLHA 6/27 | | | | | | | | | | |
|---|-------|------------------------|-------------|-------|-----------|-------------|-------|-----|------|------|---|------|
| CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL | | | | | | | | | | | | |
| LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP | | Nº 11 | | | | | | | | | | |
| LOTE: 025 - UNI | | QUADRA: QUARTERÃO 1867 | | | | | | | | | | |
| LOTEAMENTO: | | ZONA: ZC4 | | | | | | | | | | |
| <table border="1"> <tr> <th>QUADRA</th> <th>TOTAL</th> <th>COMERCIAL</th> <th>RESIDENCIAL</th> <th>TOTAL</th> </tr> <tr> <td>025</td> <td>1867</td> <td>1867</td> <td>0</td> <td>1867</td> </tr> </table> | | | QUADRA | TOTAL | COMERCIAL | RESIDENCIAL | TOTAL | 025 | 1867 | 1867 | 0 | 1867 |
| QUADRA | TOTAL | COMERCIAL | RESIDENCIAL | TOTAL | | | | | | | | |
| 025 | 1867 | 1867 | 0 | 1867 | | | | | | | | |
| DECLARAÇÕES: NÃO ENQUILTO A APROVAÇÃO DO PROJETO POR PREVISÃO DE APLICAÇÃO DE RECURSOS EM OUTROS PROJETOS DE INTERESSE PÚBLICO. | | | | | | | | | | | | |
| PROPRIETÁRIO: IMMOBILIÁRIA TEREZA CRISTINA - IMMOBILIÁRIA S/A AV. IMPERATRIZ D. TEREZA CRISTINA, 1111 - JARDIM BOA VISTA - CAMPINAS - SP | | | | | | | | | | | | |
| ARQUITETO: EDUARDO REFFO TOCH CREA Nº 41958 - REGISTRO A 41/278 INDIVIDUAL | | | | | | | | | | | | |
| RESPONSÁVEL TÉCNICO: EDUARDO REFFO TOCH CREA Nº 41958 - REGISTRO A 41/278 INDIVIDUAL | | | | | | | | | | | | |



PLANTA CHAVE
SEM ESCALA

AV. PRINCESA D'OESTE



SAÍDA
EMBARQUE /
DESEMBARQUE
HOTEL

ACESSO
ESTACIONAMENTO

VER CONTINUAÇÃO NA FOLHA 1128

2º PAVIMENTO - SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:250

- ÁREA COMPUTÁVEL 1 = 24.466,75m²
- ÁREA NÃO COMPUTÁVEL ESTACIONAMENTO RESIDENCIAL (281 VAGAS) = 9.367,32m²
- ÁREA NÃO COMPUTÁVEL ESTACIONAMENTO RESIDENCIAL (61 VAGAS) = 2.337,72m²

ATENDE A RESOLUÇÃO nº 010/20, ART. 2º, INC. II

2º PAVIMENTO - PROJETO SIMPLIFICADO FOLHA 9/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº: 11
 LOTE: 025 - UNI QUADRA: QUARTERÃO: 1867
 LOTEAMENTO: ZONA: ZC-4

| DESCRIÇÃO | VALOR | UNIDADE | TOTAL |
|---------------------|-----------|---------|-----------|
| ÁREA TOTAL | 33.834,07 | m² | 33.834,07 |
| ÁREA COMPUTÁVEL | 24.466,75 | m² | 24.466,75 |
| ÁREA NÃO COMPUTÁVEL | 9.367,32 | m² | 9.367,32 |

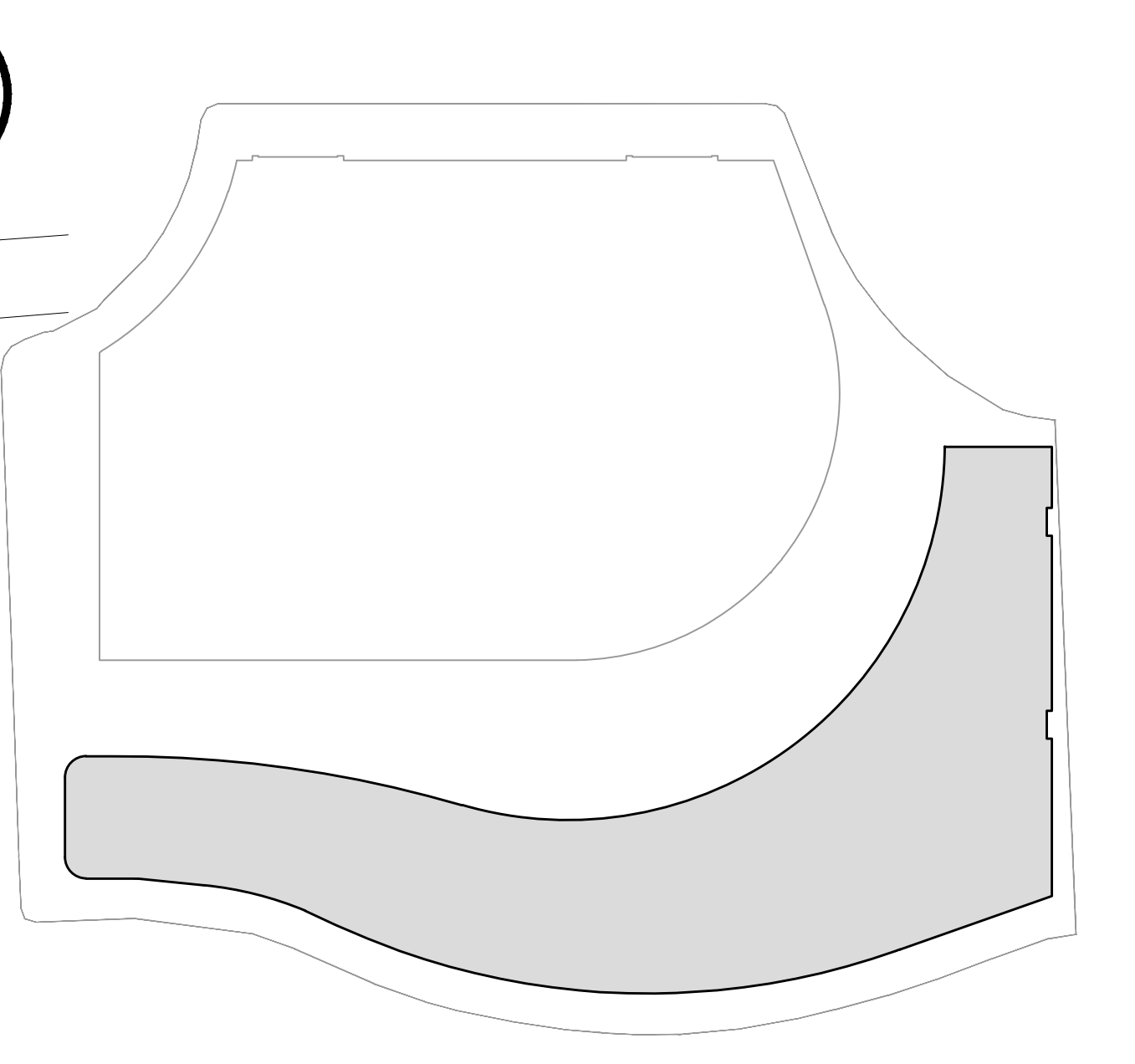
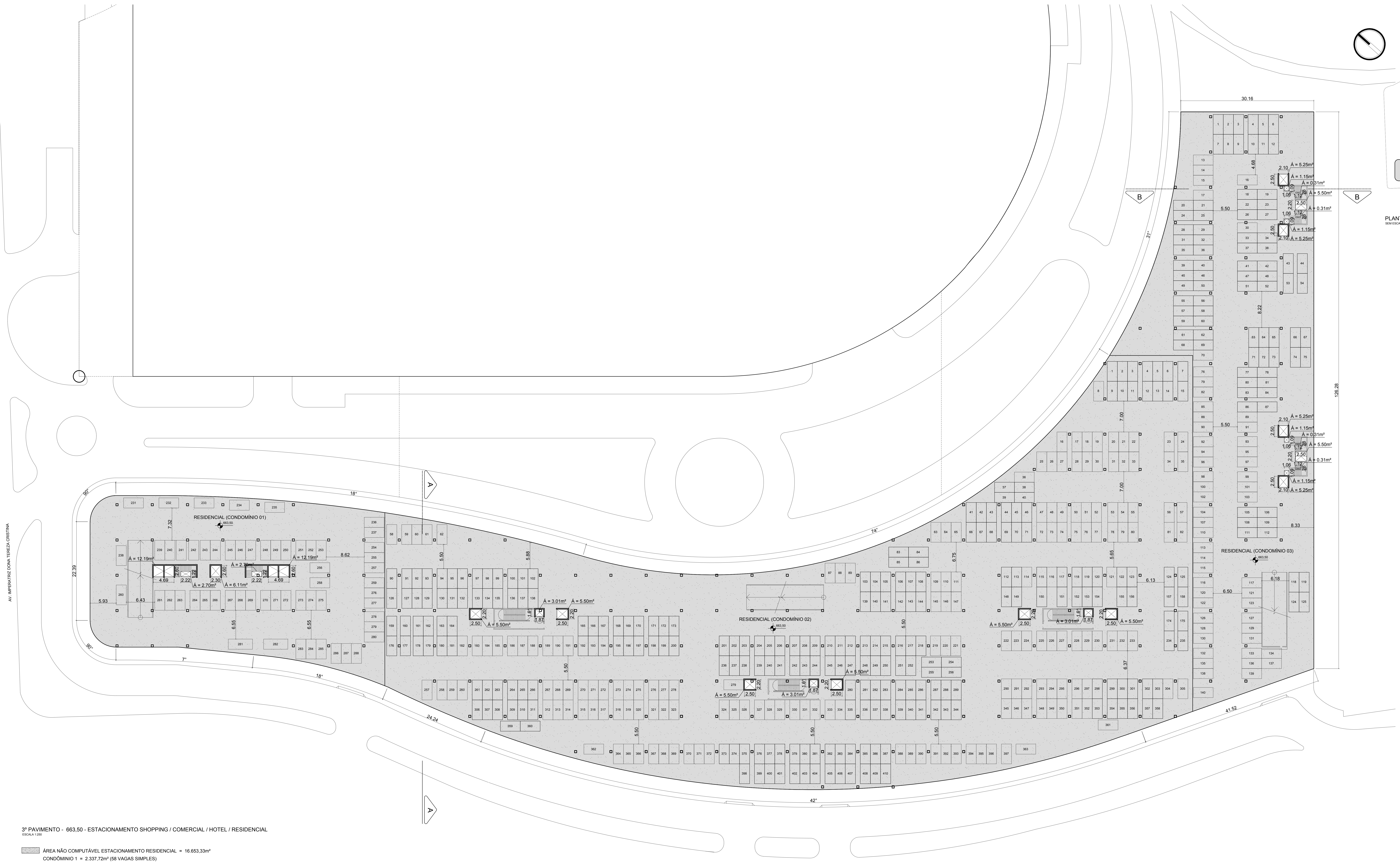
DECLARAÇÕES:

DECLARO QUE A APROVAÇÃO DO PROJETO PELO ÓRGÃO PÚBLICO NÃO IMPLICA RECONHECIMENTO DE DIREITO DE PROPRIEDADE DO TERRENO.

PROPRIETÁRIO: VICE FOLHAS 0107 a 0207

PROF. RESPONSÁVEL TÉCNICO: EDUARDO REBERTO ROCHA

RESERVADO PARA P.M.C.



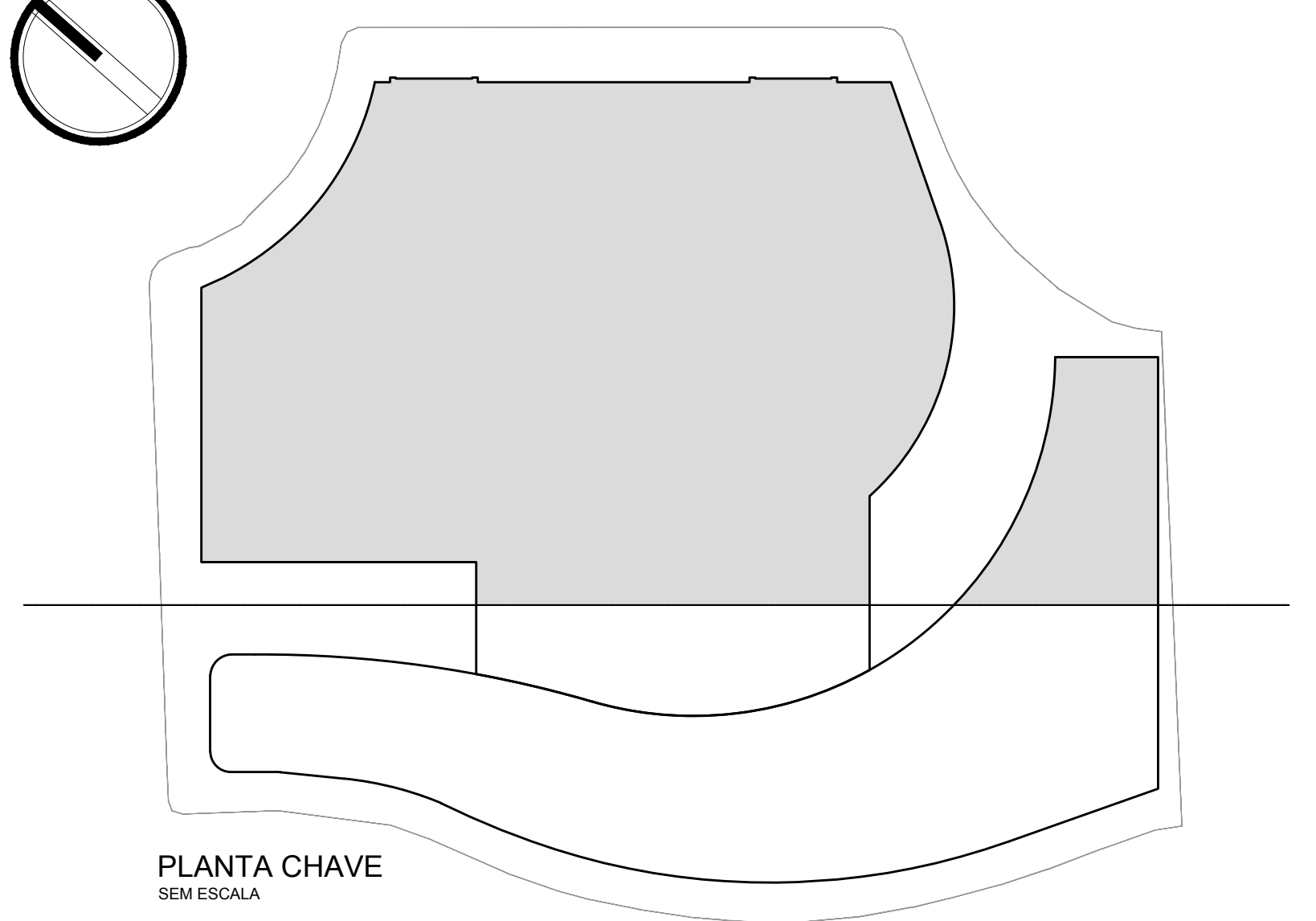
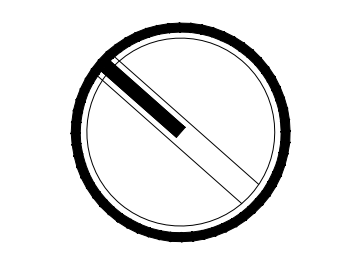
PLANTA CHAVE
SEM ESCALA

3º PAVIMENTO - 663,50 - ESTACIONAMENTO SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:250

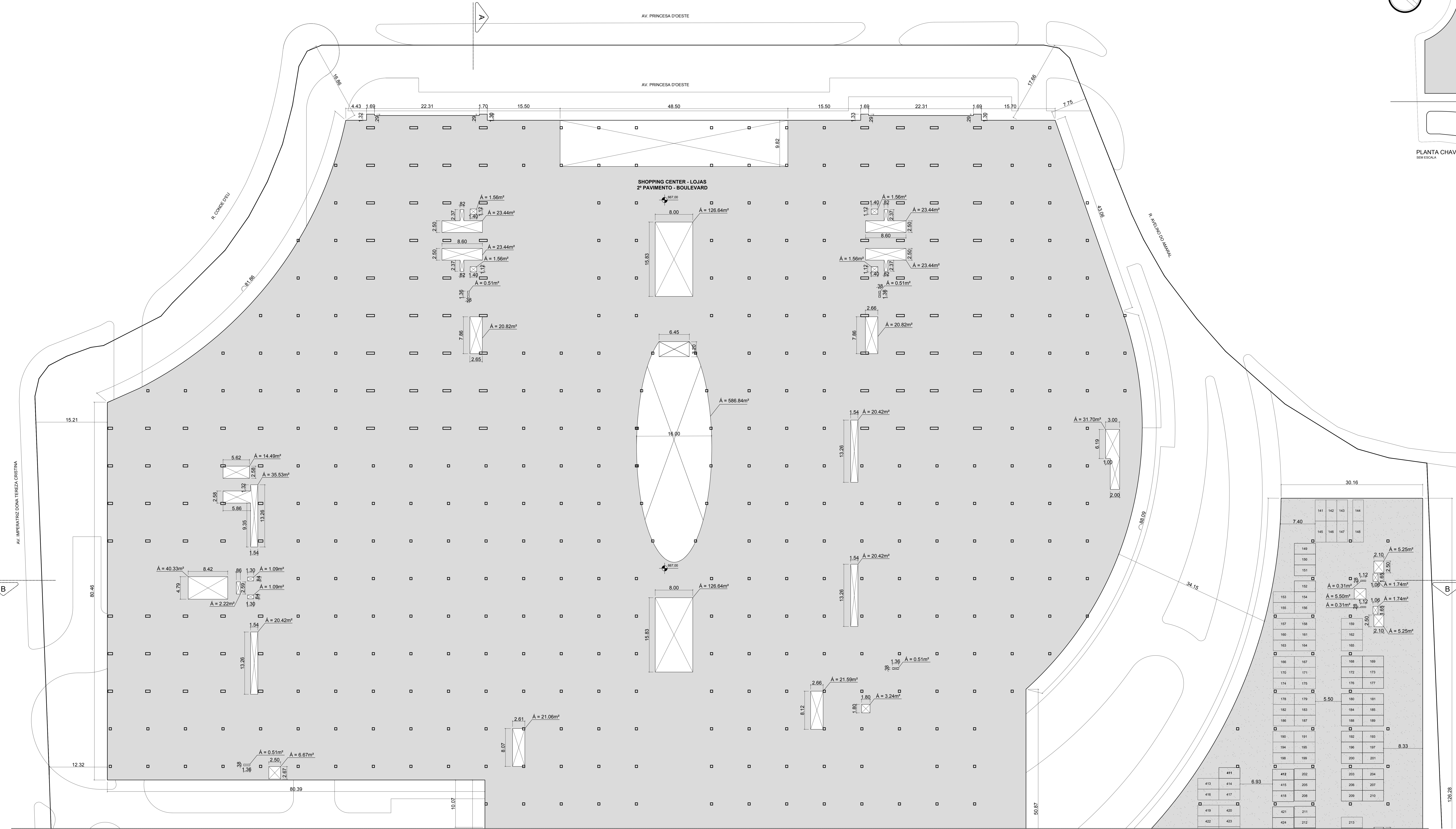
ÁREA NÃO COMPUTÁVEL ESTACIONAMENTO RESIDENCIAL = 16.653,33m²
 CONDOMÍNIO 1 = 2.337,73m² (68 VAGAS SIMPLES)
 CONDOMÍNIO 2 = 9.325,29m² (169 VAGAS SIMPLES / 241 VAGAS DUPLAS)
 CONDOMÍNIO 3 = 4.990,32m² (54 VAGAS SIMPLES / 86 VAGAS DUPLAS)
 ATENDE A RESOLUÇÃO nº 01/20, ART. 2º, INC. II

| 3º PAVIMENTO - PROJETO SIMPLIFICADO | | FOLHA 11/27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|------------|-----------|--------------|------------|-----------|------------|--------|--------|------|------|-----------|--------|--------|------|------|------------------------|-----------|-----------|------|------|------------------|-----------|-----------|------|------|---------------|-----|-----|---|---|----------------------|----|----|---|---|-----------------------|-----|-----|---|---|
| CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP | | Nº 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOTE: 025 - UNI | | QUADRA: QUARTERÃO 1867 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOTEAMENTO: | | ZONA: ZC4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>DESCRIÇÃO</th> <th>TOTAL</th> <th>DESENVOLVIDO</th> <th>REMANEJADO</th> <th>RESERVADO</th> </tr> </thead> <tbody> <tr> <td>ÁREA TOTAL</td> <td>663,50</td> <td>663,50</td> <td>0,00</td> <td>0,00</td> </tr> <tr> <td>ÁREA ÚTIL</td> <td>663,50</td> <td>663,50</td> <td>0,00</td> <td>0,00</td> </tr> <tr> <td>ÁREA DE ESTACIONAMENTO</td> <td>16.653,33</td> <td>16.653,33</td> <td>0,00</td> <td>0,00</td> </tr> <tr> <td>ÁREA DE SERVIÇOS</td> <td>16.653,33</td> <td>16.653,33</td> <td>0,00</td> <td>0,00</td> </tr> <tr> <td>ÁREA DE VAGAS</td> <td>241</td> <td>241</td> <td>0</td> <td>0</td> </tr> <tr> <td>ÁREA DE VAGAS DUPLAS</td> <td>86</td> <td>86</td> <td>0</td> <td>0</td> </tr> <tr> <td>ÁREA DE VAGAS SIMPLES</td> <td>169</td> <td>169</td> <td>0</td> <td>0</td> </tr> </tbody> </table> | | | DESCRIÇÃO | TOTAL | DESENVOLVIDO | REMANEJADO | RESERVADO | ÁREA TOTAL | 663,50 | 663,50 | 0,00 | 0,00 | ÁREA ÚTIL | 663,50 | 663,50 | 0,00 | 0,00 | ÁREA DE ESTACIONAMENTO | 16.653,33 | 16.653,33 | 0,00 | 0,00 | ÁREA DE SERVIÇOS | 16.653,33 | 16.653,33 | 0,00 | 0,00 | ÁREA DE VAGAS | 241 | 241 | 0 | 0 | ÁREA DE VAGAS DUPLAS | 86 | 86 | 0 | 0 | ÁREA DE VAGAS SIMPLES | 169 | 169 | 0 | 0 |
| DESCRIÇÃO | TOTAL | DESENVOLVIDO | REMANEJADO | RESERVADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA TOTAL | 663,50 | 663,50 | 0,00 | 0,00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA ÚTIL | 663,50 | 663,50 | 0,00 | 0,00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA DE ESTACIONAMENTO | 16.653,33 | 16.653,33 | 0,00 | 0,00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA DE SERVIÇOS | 16.653,33 | 16.653,33 | 0,00 | 0,00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA DE VAGAS | 241 | 241 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA DE VAGAS DUPLAS | 86 | 86 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ÁREA DE VAGAS SIMPLES | 169 | 169 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>DECLARAÇÕES:</p> <p>DECLARAR PARA OS SERVIÇOS DE DIREITO: INCLUSIVE NA FORMA DE DECLARAÇÃO DE RESPONSABILIDADE CIVIL E PATRIMONIAL DO PROPRIETÁRIO.</p> <p>DECLARAR PARA OS SERVIÇOS DE DIREITO: INCLUSIVE NA FORMA DE DECLARAÇÃO DE RESPONSABILIDADE CIVIL E PATRIMONIAL DO PROPRIETÁRIO.</p> <p>DECLARAR PARA OS SERVIÇOS DE DIREITO: INCLUSIVE NA FORMA DE DECLARAÇÃO DE RESPONSABILIDADE CIVIL E PATRIMONIAL DO PROPRIETÁRIO.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>PROPRIETÁRIO:</p> <p>AV. PRINCIPAIS</p> <p>AV. GUARANI</p> | <p>PROPRIETÁRIO:</p> <p>AV. PRINCIPAIS</p> <p>AV. GUARANI</p> | <p>PROPRIETÁRIO:</p> <p>AV. PRINCIPAIS</p> <p>AV. GUARANI</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RESERVADO PARA P.M.C. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1. ESTE PROJETO DE ARQUITETURA COMPARE ESTABELECIDO NO DECRETO MUNICIPAL Nº 16.710/13.
 2. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 3. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 4. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 5. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 6. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 7. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 8. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 9. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE
 10. O DESENVOLVEDOR DO PROJETO DEVE ASSINAR E REGISTRAR TODAS AS REVISÕES DE USO E DE



PLANTA CHAVE SEM ESCALA



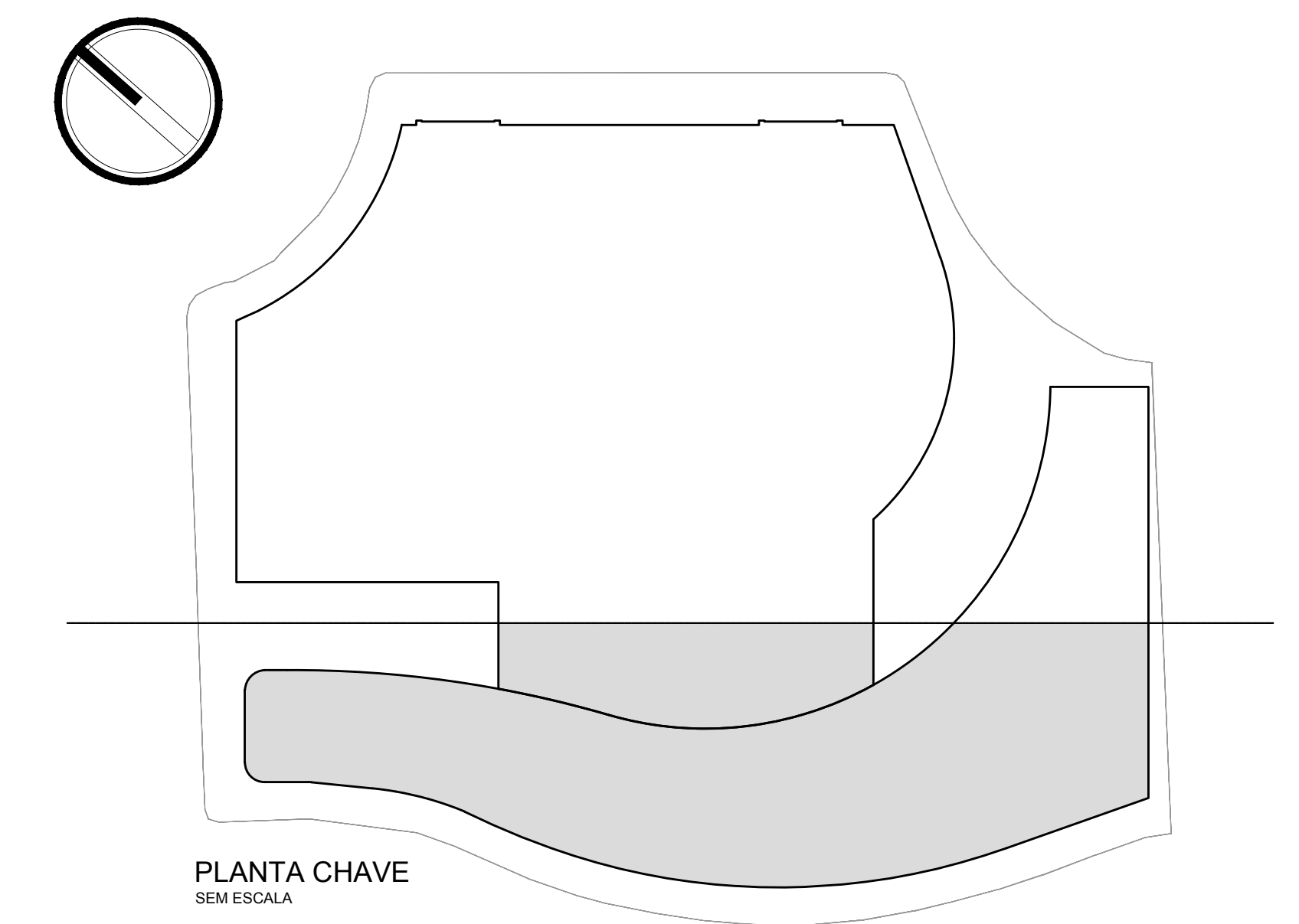
4º PAVIMENTO - PROJETO SIMPLIFICADO FOLHA 12/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

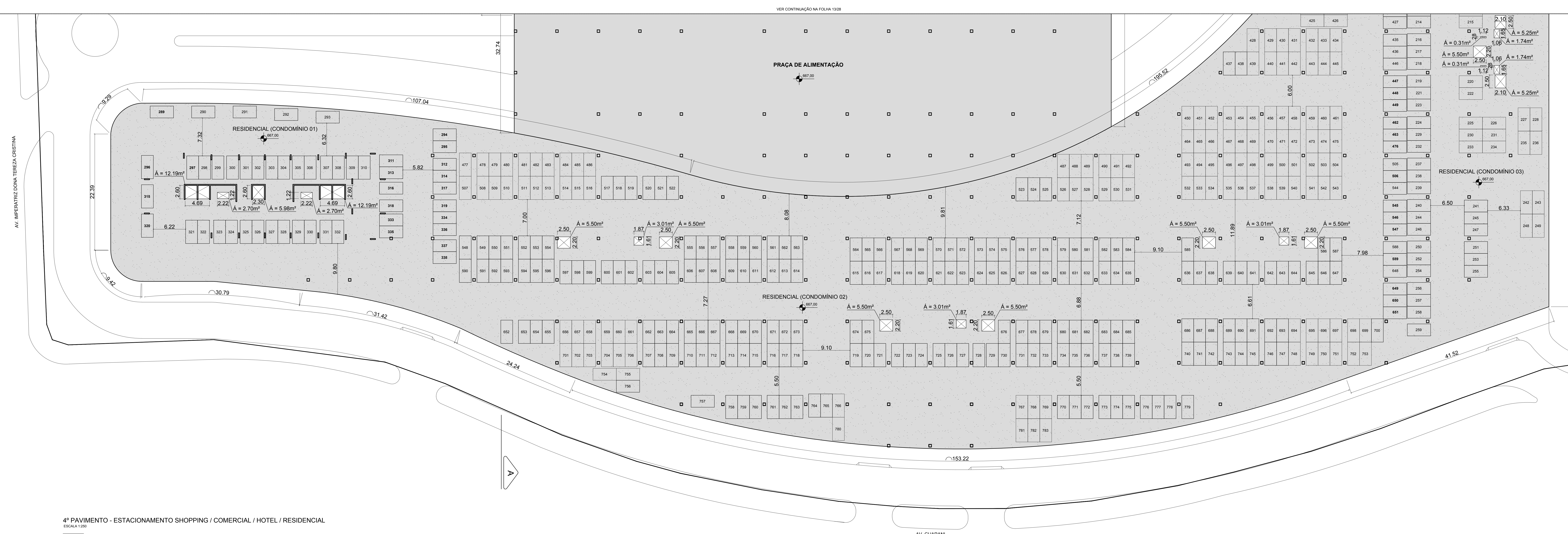
LOCAL: AV. IMPERATRIZ DONA TEREZA CRISTINA, CAMPINAS - SP Nº: 11
 LOTE: 025 - UNI QUADRA: QUARTERÃO 1867

LOTEAMENTO: ZONA: ZC4

| L. Nº DE CONDOMÍNIOS UNIDADES | | TOTAL UNIDADES | TOTAL ÁREAS | TOTAL GARAGENS | TOTAL GARAGENS |
|-------------------------------|--------------|----------------|-------------|----------------|----------------|
| COMERCIAIS | RESIDENCIAIS | | COMERCIAIS | RESIDENCIAIS | RESIDENCIAIS |
| 02 | 02 | 04 | 1.000,00 | 1.000,00 | 1.000,00 |
| 01 | 01 | 02 | 2.000,00 | 2.000,00 | 2.000,00 |
| 03 | 03 | 06 | 3.000,00 | 3.000,00 | 3.000,00 |
| 04 | 04 | 08 | 4.000,00 | 4.000,00 | 4.000,00 |
| 05 | 05 | 10 | 5.000,00 | 5.000,00 | 5.000,00 |
| 06 | 06 | 12 | 6.000,00 | 6.000,00 | 6.000,00 |
| 07 | 07 | 14 | 7.000,00 | 7.000,00 | 7.000,00 |
| 08 | 08 | 16 | 8.000,00 | 8.000,00 | 8.000,00 |
| 09 | 09 | 18 | 9.000,00 | 9.000,00 | 9.000,00 |
| 10 | 10 | 20 | 10.000,00 | 10.000,00 | 10.000,00 |
| 11 | 11 | 22 | 11.000,00 | 11.000,00 | 11.000,00 |
| 12 | 12 | 24 | 12.000,00 | 12.000,00 | 12.000,00 |
| 13 | 13 | 26 | 13.000,00 | 13.000,00 | 13.000,00 |
| 14 | 14 | 28 | 14.000,00 | 14.000,00 | 14.000,00 |
| 15 | 15 | 30 | 15.000,00 | 15.000,00 | 15.000,00 |
| 16 | 16 | 32 | 16.000,00 | 16.000,00 | 16.000,00 |
| 17 | 17 | 34 | 17.000,00 | 17.000,00 | 17.000,00 |
| 18 | 18 | 36 | 18.000,00 | 18.000,00 | 18.000,00 |
| 19 | 19 | 38 | 19.000,00 | 19.000,00 | 19.000,00 |
| 20 | 20 | 40 | 20.000,00 | 20.000,00 | 20.000,00 |
| 21 | 21 | 42 | 21.000,00 | 21.000,00 | 21.000,00 |
| 22 | 22 | 44 | 22.000,00 | 22.000,00 | 22.000,00 |
| 23 | 23 | 46 | 23.000,00 | 23.000,00 | 23.000,00 |
| 24 | 24 | 48 | 24.000,00 | 24.000,00 | 24.000,00 |
| 25 | 25 | 50 | 25.000,00 | 25.000,00 | 25.000,00 |
| 26 | 26 | 52 | 26.000,00 | 26.000,00 | 26.000,00 |
| 27 | 27 | 54 | 27.000,00 | 27.000,00 | 27.000,00 |
| 28 | 28 | 56 | 28.000,00 | 28.000,00 | 28.000,00 |
| 29 | 29 | 58 | 29.000,00 | 29.000,00 | 29.000,00 |
| 30 | 30 | 60 | 30.000,00 | 30.000,00 | 30.000,00 |
| 31 | 31 | 62 | 31.000,00 | 31.000,00 | 31.000,00 |
| 32 | 32 | 64 | 32.000,00 | 32.000,00 | 32.000,00 |
| 33 | 33 | 66 | 33.000,00 | 33.000,00 | 33.000,00 |
| 34 | 34 | 68 | 34.000,00 | 34.000,00 | 34.000,00 |
| 35 | 35 | 70 | 35.000,00 | 35.000,00 | 35.000,00 |
| 36 | 36 | 72 | 36.000,00 | 36.000,00 | 36.000,00 |
| 37 | 37 | 74 | 37.000,00 | 37.000,00 | 37.000,00 |
| 38 | 38 | 76 | 38.000,00 | 38.000,00 | 38.000,00 |
| 39 | 39 | 78 | 39.000,00 | 39.000,00 | 39.000,00 |
| 40 | 40 | 80 | 40.000,00 | 40.000,00 | 40.000,00 |
| 41 | 41 | 82 | 41.000,00 | 41.000,00 | 41.000,00 |
| 42 | 42 | 84 | 42.000,00 | 42.000,00 | 42.000,00 |
| 43 | 43 | 86 | 43.000,00 | 43.000,00 | 43.000,00 |
| 44 | 44 | 88 | 44.000,00 | 44.000,00 | 44.000,00 |
| 45 | 45 | 90 | 45.000,00 | 45.000,00 | 45.000,00 |
| 46 | 46 | 92 | 46.000,00 | 46.000,00 | 46.000,00 |
| 47 | 47 | 94 | 47.000,00 | 47.000,00 | 47.000,00 |
| 48 | 48 | 96 | 48.000,00 | 48.000,00 | 48.000,00 |
| 49 | 49 | 98 | 49.000,00 | 49.000,00 | 49.000,00 |
| 50 | 50 | 100 | 50.000,00 | 50.000,00 | 50.000,00 |
| 51 | 51 | 102 | 51.000,00 | 51.000,00 | 51.000,00 |
| 52 | 52 | 104 | 52.000,00 | 52.000,00 | 52.000,00 |
| 53 | 53 | 106 | 53.000,00 | 53.000,00 | 53.000,00 |
| 54 | 54 | 108 | 54.000,00 | 54.000,00 | 54.000,00 |
| 55 | 55 | 110 | 55.000,00 | 55.000,00 | 55.000,00 |
| 56 | 56 | 112 | 56.000,00 | 56.000,00 | 56.000,00 |
| 57 | 57 | 114 | 57.000,00 | 57.000,00 | 57.000,00 |
| 58 | 58 | 116 | 58.000,00 | 58.000,00 | 58.000,00 |
| 59 | 59 | 118 | 59.000,00 | 59.000,00 | 59.000,00 |
| 60 | 60 | 120 | 60.000,00 | 60.000,00 | 60.000,00 |
| 61 | 61 | 122 | 61.000,00 | 61.000,00 | 61.000,00 |
| 62 | 62 | 124 | 62.000,00 | 62.000,00 | 62.000,00 |
| 63 | 63 | 126 | 63.000,00 | 63.000,00 | 63.000,00 |
| 64 | 64 | 128 | 64.000,00 | 64.000,00 | 64.000,00 |
| 65 | 65 | 130 | 65.000,00 | 65.000,00 | 65.000,00 |
| 66 | 66 | 132 | 66.000,00 | 66.000,00 | 66.000,00 |
| 67 | 67 | 134 | 67.000,00 | 67.000,00 | 67.000,00 |
| 68 | 68 | 136 | 68.000,00 | 68.000,00 | 68.000,00 |
| 69 | 69 | 138 | 69.000,00 | 69.000,00 | 69.000,00 |
| 70 | 70 | 140 | 70.000,00 | 70.000,00 | 70.000,00 |
| 71 | 71 | 142 | 71.000,00 | 71.000,00 | 71.000,00 |
| 72 | 72 | 144 | 72.000,00 | 72.000,00 | 72.000,00 |
| 73 | 73 | 146 | 73.000,00 | 73.000,00 | 73.000,00 |
| 74 | 74 | 148 | 74.000,00 | 74.000,00 | 74.000,00 |
| 75 | 75 | 150 | 75.000,00 | 75.000,00 | 75.000,00 |
| 76 | 76 | 152 | 76.000,00 | 76.000,00 | 76.000,00 |
| 77 | 77 | 154 | 77.000,00 | 77.000,00 | 77.000,00 |
| 78 | 78 | 156 | 78.000,00 | 78.000,00 | 78.000,00 |
| 79 | 79 | 158 | 79.000,00 | 79.000,00 | 79.000,00 |
| 80 | 80 | 160 | 80.000,00 | 80.000,00 | 80.000,00 |
| 81 | 81 | 162 | 81.000,00 | 81.000,00 | 81.000,00 |
| 82 | 82 | 164 | 82.000,00 | 82.000,00 | 82.000,00 |
| 83 | 83 | 166 | 83.000,00 | 83.000,00 | 83.000,00 |
| 84 | 84 | 168 | 84.000,00 | 84.000,00 | 84.000,00 |
| 85 | 85 | 170 | 85.000,00 | 85.000,00 | 85.000,00 |
| 86 | 86 | 172 | 86.000,00 | 86.000,00 | 86.000,00 |
| 87 | 87 | 174 | 87.000,00 | 87.000,00 | 87.000,00 |
| 88 | 88 | 176 | 88.000,00 | 88.000,00 | 88.000,00 |
| 89 | 89 | 178 | 89.000,00 | 89.000,00 | 89.000,00 |
| 90 | 90 | 180 | 90.000,00 | 90.000,00 | 90.000,00 |
| 91 | 91 | 182 | 91.000,00 | 91.000,00 | 91.000,00 |
| 92 | 92 | 184 | 92.000,00 | 92.000,00 | 92.000,00 |
| 93 | 93 | 186 | 93.000,00 | 93.000,00 | 93.000,00 |
| 94 | 94 | 188 | 94.000,00 | 94.000,00 | 94.000,00 |
| 95 | 95 | 190 | 95.000,00 | 95.000,00 | 95.000,00 |
| 96 | 96 | 192 | 96.000,00 | 96.000,00 | 96.000,00 |
| 97 | 97 | 194 | 97.000,00 | 97.000,00 | 97.000,00 |
| 98 | 98 | 196 | 98.000,00 | 98.000,00 | 98.000,00 |
| 99 | 99 | 198 | 99.000,00 | 99.000,00 | 99.000,00 |
| 100 | 100 | 200 | 100.000,00 | 100.000,00 | 100.000,00 |
| 101 | 101 | 202 | 101.000,00 | 101.000,00 | 101.000,00 |
| 102 | 102 | 204 | 102.000,00 | 102.000,00 | 102.000,00 |
| 103 | 103 | 206 | 103.000,00 | 103.000,00 | 103.000,00 |
| 104 | 104 | 208 | 104.000,00 | 104.000,00 | 104.000,00 |
| 105 | 105 | 210 | 105.000,00 | 105.000,00 | 105.000,00 |
| 106 | 106 | 212 | 106.000,00 | 106.000,00 | 106.000,00 |
| 107 | 107 | 214 | 107.000,00 | 107.000,00 | 107.000,00 |
| 108 | 108 | 216 | 108.000,00 | 108.000,00 | 108.000,00 |
| 109 | 109 | 218 | 109.000,00 | 109.000,00 | 109.000,00 |
| 110 | 110 | 220 | 110.000,00 | 110.000,00 | 110.000,00 |
| 111 | 111 | 222 | 111.000,00 | 111.000,00 | 111.000,00 |
| 112 | 112 | 224 | 112.000,00 | 112.000,00 | 112.000,00 |
| 113 | 113 | 226 | 113.000,00 | 113.000,00 | 113.000,00 |
| 114 | 114 | 228 | 114.000,00 | 114.000,00 | 114.000,00 |
| 115 | 115 | 230 | 115.000,00 | 115.000,00 | 115.000,00 |
| 116 | 116 | 232 | 116.000,00 | 116.000,00 | 116.000,00 |
| 117 | 117 | 234 | 117.000,00 | 117.000,00 | 117.000,00 |
| 118 | 118 | 236 | 118.000,00 | 118.000,00 | 118.000,00 |
| 119 | 119 | 238 | 119.000,00 | 119.000,00 | 119.000,00 |
| 120 | 120 | 240 | 120.000,00 | 120.000,00 | 120.000,00 |
| 121 | 121 | 242 | 121.000,00 | 121.000,00 | 121.000,00 |
| 122 | 122 | 244 | 122.000,00 | 122.000,00 | 122.000,00 |
| 123 | 123 | 246 | 123.000,00 | 123.000,00 | 123.000,00 |
| 124 | 124 | 248 | 124.000,00 | 124.000,00 | 124.000,00 |
| 125 | 125 | 250 | 125.000,00 | 125.000,00 | 125.000,00 |
| 126 | 126 | 252 | 126.000,00 | 126.000,00 | 126.000,00 |
| 127 | 127 | 254 | 127.000,00 | 127.000,00 | 127.000,00 |
| 128 | 128 | 256 | 128.000,00 | 128.000,00 | 128.000,00 |
| 129 | 129 | 258 | 129.000,00 | 129.000,00 | 129.000,00 |
| 130 | 130 | 260 | 130.000,00 | 130.000,00 | 130.000,00 |
| 131 | 131 | 262 | 131.000,00 | 131.000,00 | 131.000,00 |
| 132 | 132 | 264 | 132.000,00 | 132.000,00 | 132.000,00 |
| 133 | 133 | 266 | 133.000,00 | 133.000,00 | 133.000,00 |
| 134 | 134 | 268 | 134.000,00 | 134.000,00 | 134.000,00 |
| 135 | 135 | 270 | 135.000,00 | 135.000,00 | 135.000,00 |
| 136 | 136 | 272 | 136.000,00 | 136.000,00 | 136.000,00 |
| 137 | 137 | 274 | 137.000,00 | 137.000,00 | 137.000,00 |
| 138 | 138 | 276 | 138.000,00 | 138.000,00 | 138.000,00 |
| 139 | 139 | 278 | 139.000,00 | 139.000,00 | 139.000,00 |
| 140 | 140 | 280 | 140.000,00 | 140.000,00 | 140.000,00 |
| 141 | 141 | 282 | 141.000,00 | 141.000,00 | 141.000,00 |
| 142 | 142 | 284 | 142.000,00 | 142.000,00 | 142.000,00 |
| 143 | 143 | 286 | 143.000,00 | 143.000,00 | 143.000,00 |
| 144 | 144 | 288 | 144.000,00 | 144.000,00 | 144.000,00 |
| 145 | 145 | 290 | 145.000,00 | 145.000,00 | 145.000,00 |
| 146 | 146 | 292 | 146.000,00 | 146.000,00 | 146.000,00 |
| 147 | 147 | 294 | 147.000,00 | 147.000,00 | 147.000,00 |
| 148 | 148 | 296 | 148.000,00 | 148.000,00 | 148.000,00 |
| 149 | 149 | 298 | 149.000,00 | 149.000,00 | 149.000,00 |
| 150 | 150 | 300 | 150.000,00 | 150.000,00 | 150.000,0 |



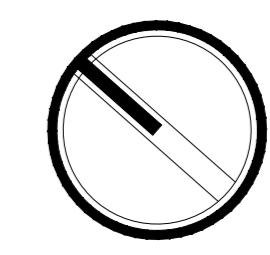
PLANTA CHAVE
SEM ESCALA



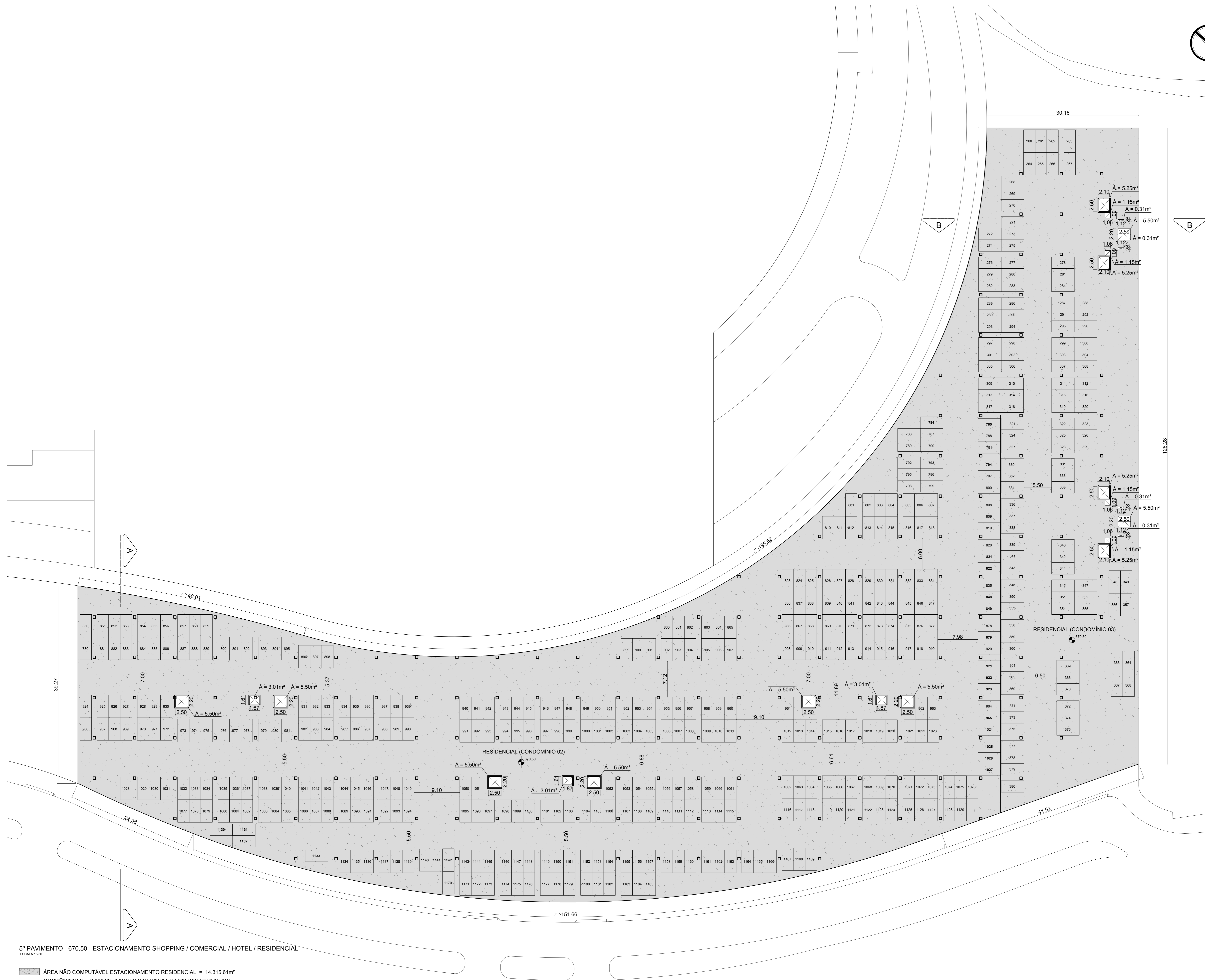
4º PAVIMENTO - ESTACIONAMENTO SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:250

ÁREA COMPUTÁVEL = 29.571,37m²
ESTACIONAMENTO RESIDENCIAL = 16.653,96m²
ATENDE A RESOLUÇÃO nº 0120, ART. 2º, INC. II

| 4º PAVIMENTO - PROJETO SIMPLIFICADO | | FOLHA 13/27 | | | | | | | | | | | | | | | | | | | | |
|--|---|---|------------|-------|-----------|-------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|------------------------|-----------|------------------------|-----------|------------------|-----------|------------------|-----------|
| CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL | | | | | | | | | | | | | | | | | | | | | | |
| LOCAL: AV. IMPERATRIZ DONA TEZEZA CRISTINA, CAMPINAS - SP | | Nº 11 | | | | | | | | | | | | | | | | | | | | |
| LOTE: 025 - UNI | | QUADRA: QUARTERÃO 1867 | | | | | | | | | | | | | | | | | | | | |
| LOTEAMENTO: ZONA: ZC4 | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>DESCRIÇÃO</th> <th>TOTAL</th> <th>DESCRIÇÃO</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>ÁREA TOTAL</td> <td>100.000,00</td> <td>ÁREA TOTAL</td> <td>100.000,00</td> </tr> <tr> <td>ÁREA ÚTIL</td> <td>29.571,37</td> <td>ÁREA ÚTIL</td> <td>29.571,37</td> </tr> <tr> <td>ÁREA DE ESTACIONAMENTO</td> <td>16.653,96</td> <td>ÁREA DE ESTACIONAMENTO</td> <td>16.653,96</td> </tr> <tr> <td>ÁREA DE SERVIÇOS</td> <td>12.817,41</td> <td>ÁREA DE SERVIÇOS</td> <td>12.817,41</td> </tr> </tbody> </table> | | | DESCRIÇÃO | TOTAL | DESCRIÇÃO | TOTAL | ÁREA TOTAL | 100.000,00 | ÁREA TOTAL | 100.000,00 | ÁREA ÚTIL | 29.571,37 | ÁREA ÚTIL | 29.571,37 | ÁREA DE ESTACIONAMENTO | 16.653,96 | ÁREA DE ESTACIONAMENTO | 16.653,96 | ÁREA DE SERVIÇOS | 12.817,41 | ÁREA DE SERVIÇOS | 12.817,41 |
| DESCRIÇÃO | TOTAL | DESCRIÇÃO | TOTAL | | | | | | | | | | | | | | | | | | | |
| ÁREA TOTAL | 100.000,00 | ÁREA TOTAL | 100.000,00 | | | | | | | | | | | | | | | | | | | |
| ÁREA ÚTIL | 29.571,37 | ÁREA ÚTIL | 29.571,37 | | | | | | | | | | | | | | | | | | | |
| ÁREA DE ESTACIONAMENTO | 16.653,96 | ÁREA DE ESTACIONAMENTO | 16.653,96 | | | | | | | | | | | | | | | | | | | |
| ÁREA DE SERVIÇOS | 12.817,41 | ÁREA DE SERVIÇOS | 12.817,41 | | | | | | | | | | | | | | | | | | | |
| DECLARAÇÕES: | | | | | | | | | | | | | | | | | | | | | | |
| <p>PROPRIETÁRIO:</p> <p>AV. PRINCEZA DORIS</p> <p>AV. GUARANI</p> | <p>PROPRIETÁRIO:</p> <p>AV. PRINCEZA DORIS</p> <p>AV. GUARANI</p> | <p>PROPRIETÁRIO:</p> <p>AV. PRINCEZA DORIS</p> <p>AV. GUARANI</p> | | | | | | | | | | | | | | | | | | | | |
| RESERVADO PARA P.M.C. | | | | | | | | | | | | | | | | | | | | | | |



PLANTA CHAVE SEM ESCALA



5º PAVIMENTO - 670,50 - ESTACIONAMENTO SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:250

ÁREA NÃO COMPUTÁVEL ESTACIONAMENTO RESIDENCIAL = 14.315,61m²
CONDÔMÍNIO 2 = 9.325,29m² (240 VAGAS SIMPLES / 162 VAGAS DUPLAS)
CONDÔMÍNIO 3 = 4.990,32m² (62 VAGAS SIMPLES / 59 VAGAS DUPLAS)
ATENDE A RESOLUÇÃO nº 01/20, ART. 2º, INC. II

AV. GUARANI

5º PAVIMENTO - PROJETO SIMPLIFICADO FOLHA: 14/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº: 11
LOTE: 025 - LINI QUADRA: QUARTEIRÃO: 1867

| Nº DE CONSTRUTORES UNIDADES | TOTAL CONSTRUTORES | | Nº BARRIDOS UNIDADES | | TOTAL BARRIDOS | | TOTAL UNIDADES | |
|-----------------------------|--------------------|-------------|----------------------|-------------|----------------|-------------|----------------|-------------|
| | COMERCIAL | RESIDENCIAL | COMERCIAL | RESIDENCIAL | COMERCIAL | RESIDENCIAL | COMERCIAL | RESIDENCIAL |
| 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | 02 |
| 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 | 03 |

DECLARAÇÕES:

DECLARO QUE A APROVAÇÃO DO PROJETO PELA PROPRIETARIA NÃO IMPLICA NO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO.

DECLARO QUE O BARRIDO DE DEBITO, INCLUSIVE NA ÚLTIMA FOLHA, QUANDO FOR ELABORADO COM TOTAL OBSERVÂNCIA ÀS RESOLUÇÕES DEBITO, INCLUSIVE A RESOLUÇÃO Nº 01/20, ATENDE A RESOLUÇÃO Nº 01/20, ART. 2º, INC. II.

DECLARO QUE:

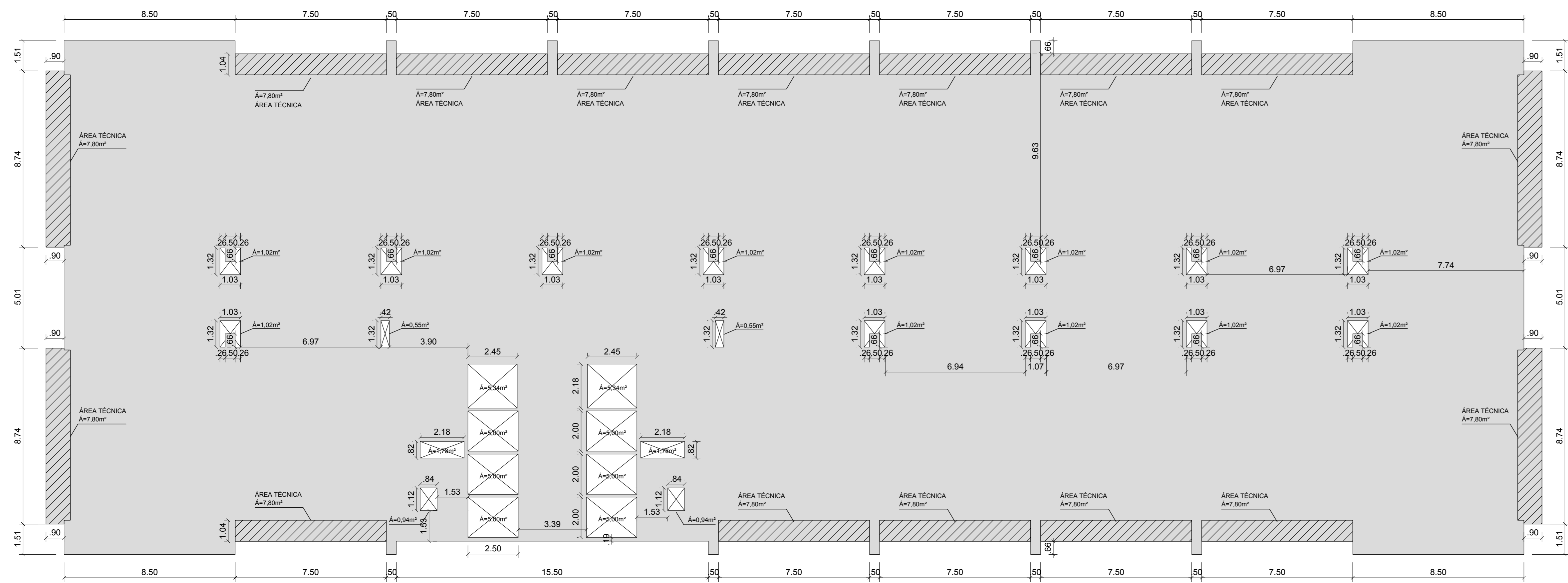
1. A OBRA NÃO DESTINA-SE A SER CONSIDERADA COMO PROJETO APROVADO PARA FISCALIZAÇÃO E MONITORAMENTO POR PARTE DO PODERADO MUNICIPAL, OU SEJA, NÃO SE ENQUADRA EM NENHUMA DAS SITUAÇÕES DE LICENCIAMENTO DE CONCESSÃO DE SERVIÇOS PÚBLICOS, QUANDO NECESSÁRIO.

2. QUALQUER ALTERAÇÃO AO PROJETO SERÁ IMEDIATAMENTE COMUNICADA À FISCALIZAÇÃO.

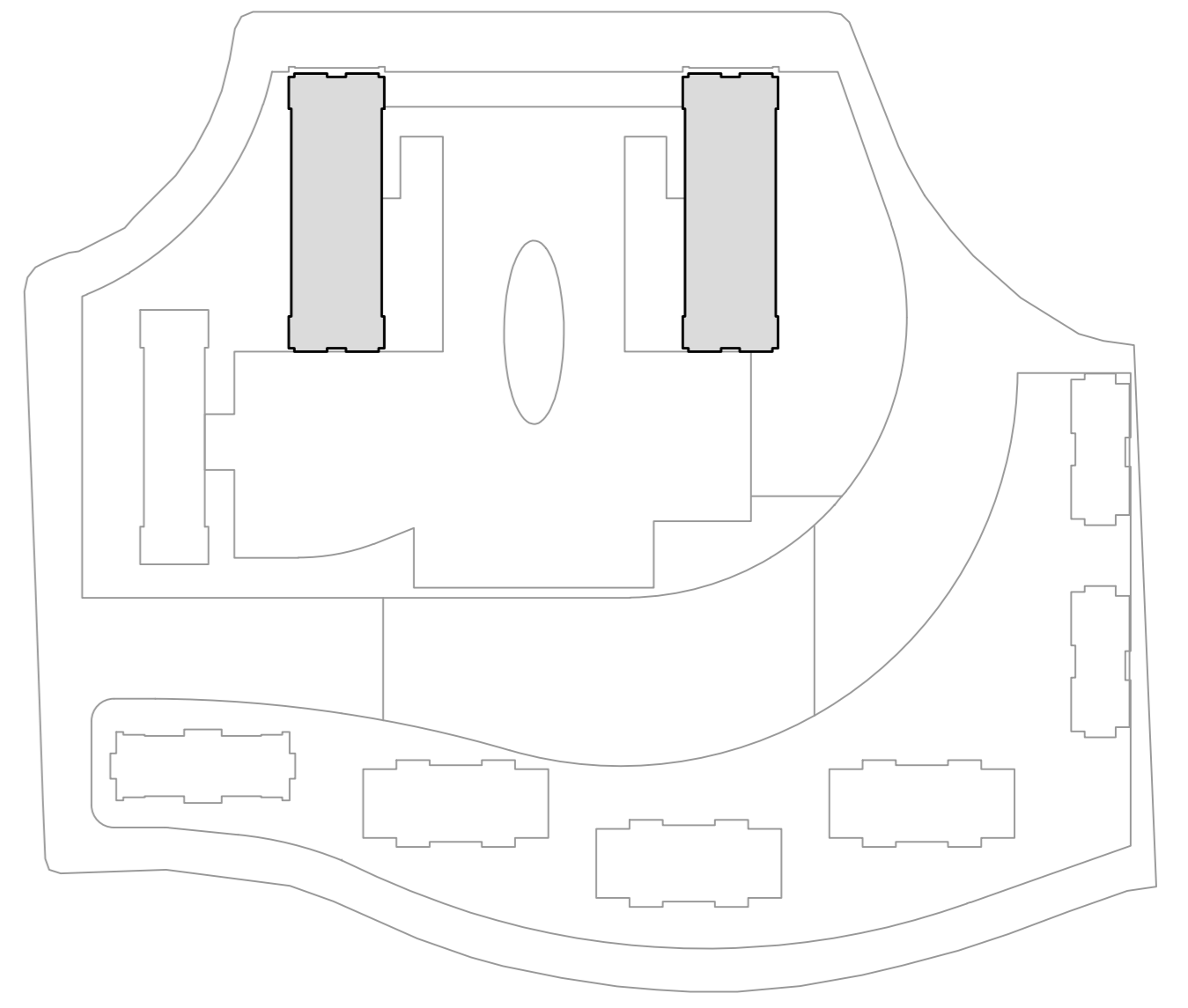
RESERVADO PARA P.M.C.

RESERVADO PARA P.M.C.

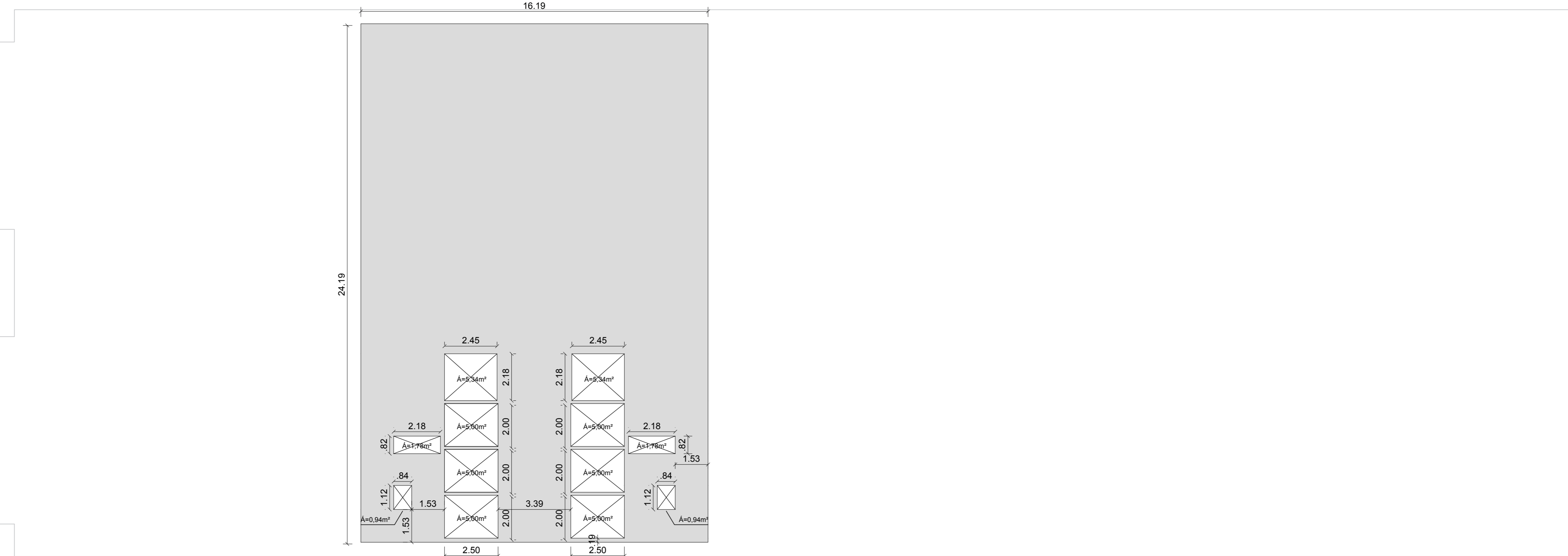
- 1. ESTE PROJETO FOI ANALISADO CONFORME ESTABELECIDO NO DECRETO MUNICIPAL Nº. 16.701/15
- 2. OS ESTABELECIDOS A PARTIR DE 15/04/2015 FICAM SUJEITOS ÀS RESTRIÇÕES DE USO E DE FISCALIZAÇÃO DE TRÁFEGO DA LEGISLAÇÃO EM VIGOR DA PREFEITURA MUNICIPAL DE CAMPINAS
- 3. ESTE PROJETO ATENDE A RESOLUÇÃO Nº 01/20
- 4. A ÁREA PARA ESTACIONAMENTO RESIDENCIAL EXISTENTE NO TERRENO OU VIZINHO NÃO FICAM GERANDO PARQUEAMENTO PARA OBRAS DE CONSTRUÇÃO E NÃO REQUER O ACESSO OU USO DE ESPAÇOS DE ESTACIONAMENTO DO LOCAL, SE NÃO DESTINADO EXCLUSIVAMENTE À MANUTENÇÃO DE UNIDADES CONSTRUÍDAS EM CONDIÇÃO



PAV. TIPO - COMERCIAL (20 PAV)
 ESCALA 1:125
 ÁREA COMPUTÁVEL 1 = 1615,04 x 20 = 32.300,80m²
 ÁREA COMPUTÁVEL 2 EQUIPAMENTO MECÂNICO (PRIVATIVO) = 135,55 x 20 = 2711,00m²
 ATENDE A RESOLUÇÃO Nº 01/2020 ART.2º INC. III



PLANTA CHAVE
SEM ESCALA



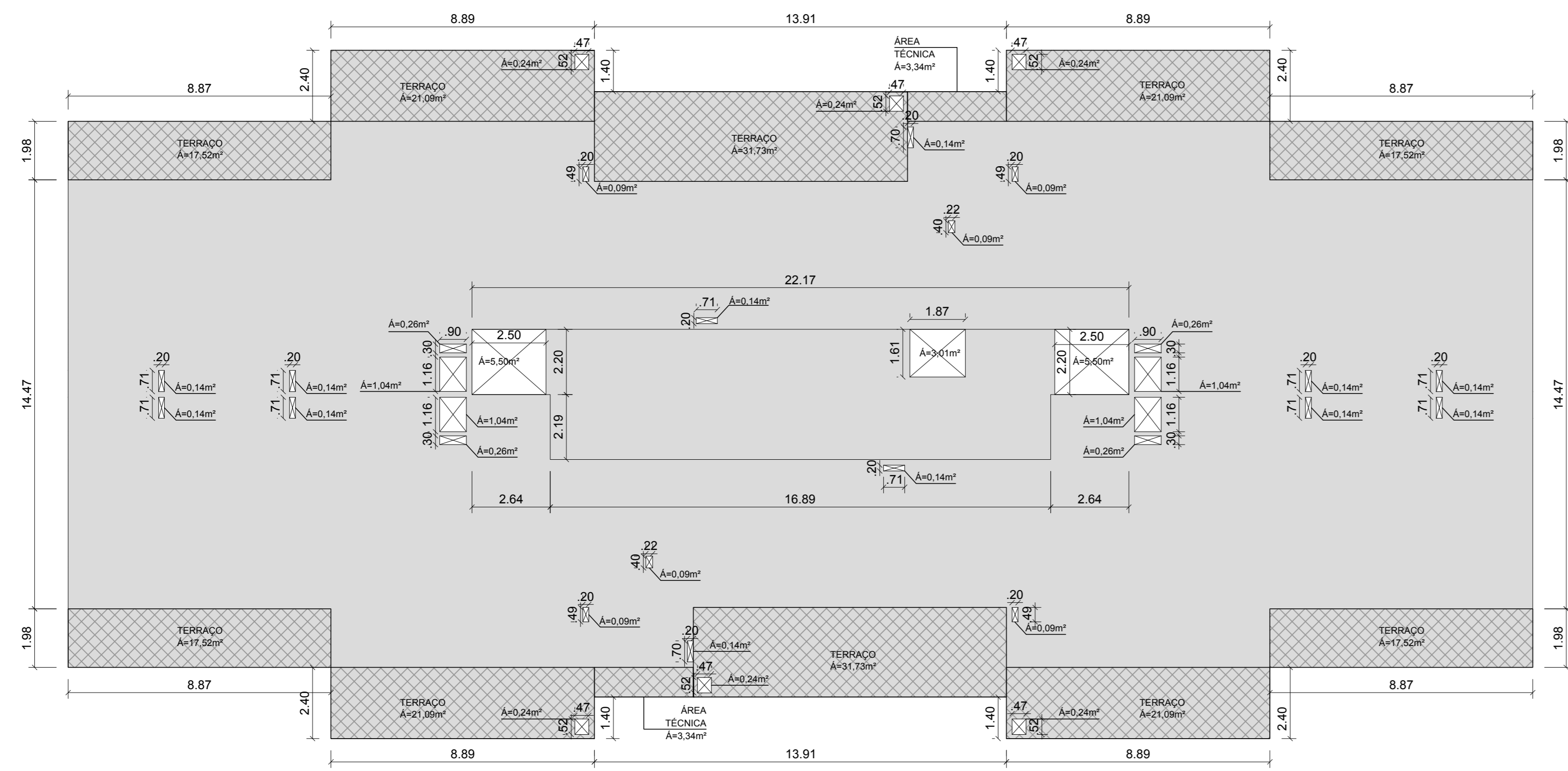
BARRILETE - COMERCIAL
 ESCALA 1:125
 ÁREA NÃO COMPUTÁVEL = 345,50m²



CASA DE MÁQUINA
 ESCALA 1:125
 ÁREA NÃO COMPUTÁVEL = 93,75m²
COMERCIAL
 ESCALA 1:250
 ÁREA A CONSTRUIR = 35.451,05 x 2 TORRES = 70.023,60m²
 ATENDE A RESOLUÇÃO Nº 01/20, ART.2º, INC. II

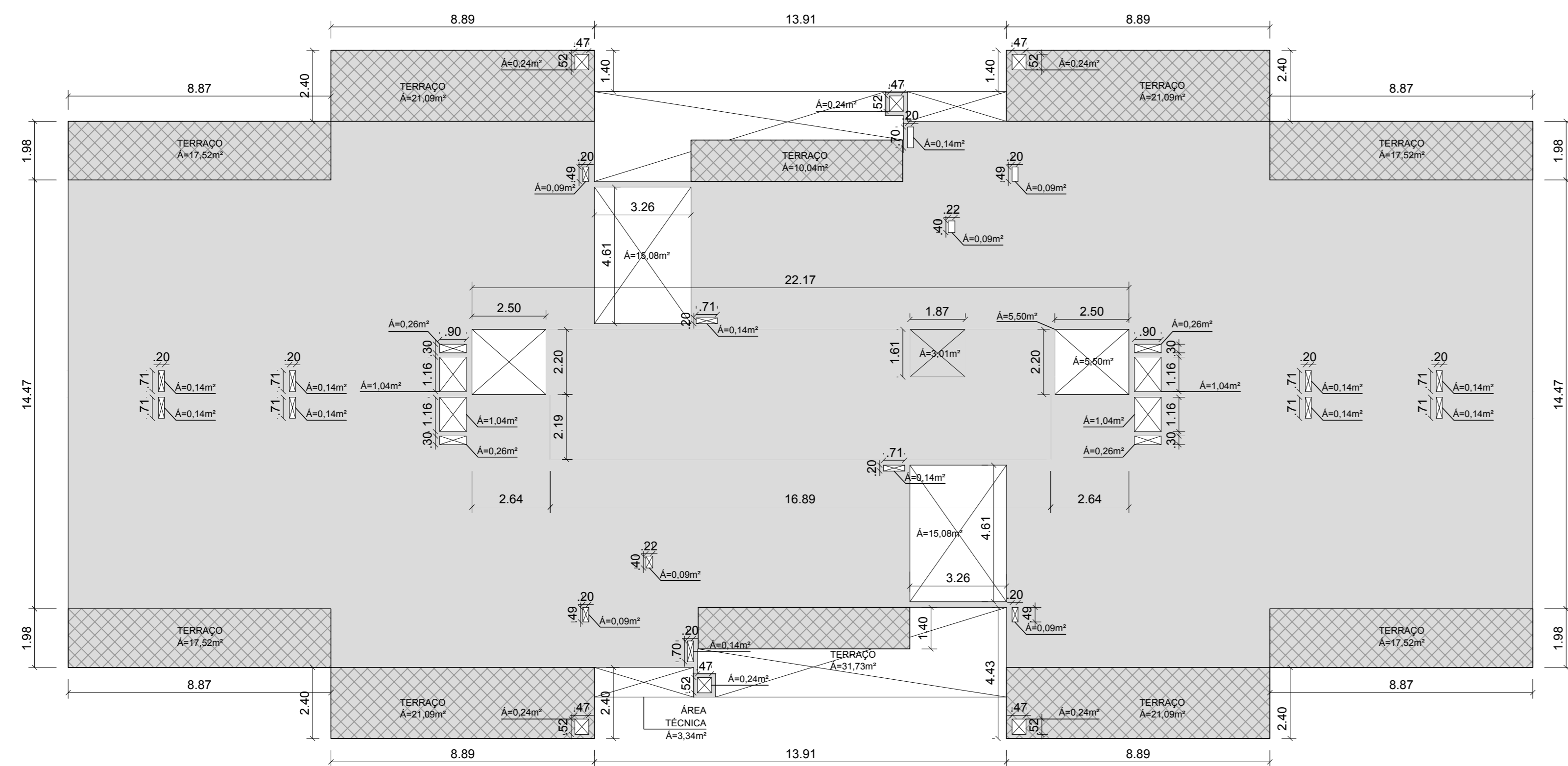
| EDIFÍCIOS COMERCIAIS - PROJETO SIMPLIFICADO | | FOLHA: 18/27 | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|--|-------------------|-----------------------|-----------------|----------------|-------------|----|----|----|----|-----------|----|----|----|----|-------|----|----|----|----|--|
| CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL | | | | | | | | | | | | | | | | | | | | | | |
| LOCAL: AV. IMPERATRIZ D.ª TEREZA CRISTINA, CAMPINAS - SP Nº: 11 LOTE: 025 - LINI QUADRA: QUARTEIRÃO: 1867 LOTEAMENTO: ZONA: ZC4 | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Nº DE DORMITÓRIOS UNIDADES</th> <th>TOTAL DORMITÓRIOS</th> <th>Nº BANHEIROS UNIDADES</th> <th>TOTAL BANHEIROS</th> <th>TOTAL UNIDADES</th> </tr> </thead> <tbody> <tr> <td>RESIDENCIAL</td> <td>01</td> <td>01</td> <td>01</td> <td>01</td> </tr> <tr> <td>COMERCIAL</td> <td>01</td> <td>01</td> <td>01</td> <td>01</td> </tr> <tr> <td>TOTAL</td> <td>02</td> <td>02</td> <td>02</td> <td>02</td> </tr> </tbody> </table> | | Nº DE DORMITÓRIOS UNIDADES | TOTAL DORMITÓRIOS | Nº BANHEIROS UNIDADES | TOTAL BANHEIROS | TOTAL UNIDADES | RESIDENCIAL | 01 | 01 | 01 | 01 | COMERCIAL | 01 | 01 | 01 | 01 | TOTAL | 02 | 02 | 02 | 02 | DECLARAÇÕES: DECLARO QUE A APROVAÇÃO DO PROJETO PELA PRETENSOR NÃO IMPLICA NO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO. ASSINATURA: _____ NOME: MARCO ANTONIO DE A. ASSIS EMPRESA: MARCO ANTONIO DE A. ASSIS - ENGENHEIRO Nº de Registro: 123456789 |
| Nº DE DORMITÓRIOS UNIDADES | TOTAL DORMITÓRIOS | Nº BANHEIROS UNIDADES | TOTAL BANHEIROS | TOTAL UNIDADES | | | | | | | | | | | | | | | | | | |
| RESIDENCIAL | 01 | 01 | 01 | 01 | | | | | | | | | | | | | | | | | | |
| COMERCIAL | 01 | 01 | 01 | 01 | | | | | | | | | | | | | | | | | | |
| TOTAL | 02 | 02 | 02 | 02 | | | | | | | | | | | | | | | | | | |
| RESPONSÁVEL TÉCNICO ASSINATURA: _____ NOME: EDUARDO FREIRE ROCHA CREA: 40188-1 Nº de Registro: 411778-INDIVIDUAL | | DECLARO QUE A APROVAÇÃO DO PROJETO PELA PRETENSOR NÃO IMPLICA NO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO. ASSINATURA: _____ NOME: EDUARDO FREIRE ROCHA CREA: 40188-1 Nº de Registro: 411778-INDIVIDUAL | | | | | | | | | | | | | | | | | | | | |
| RESERVADO PARA P.M.C. | | | | | | | | | | | | | | | | | | | | | | |

1. ESTE PROJETO FOI ANALISADO CONFORME ESTABELECIDO NO DECRETO MUNICIPAL Nº. 16.751/15
 2. O ESTABELECIDO EM NESTA LICENÇA NÃO GARANTE A QUALIDADE DO PROJETO OU A REALIZAÇÃO DO EMPREENDIMENTO
 3. ESTE PROJETO ATENDE A NBR 5508 E DECRETO 536/04
 4. A ÁREA PARA EQUIPAMENTO MECÂNICO EXISTENTE NO TERRENO OU VIZINHO NÃO SERÁ GERENCIADA POR OBRAS DE REFORMA E NÃO REUSARÁ O TIPO QUADRA CORPO ÚNICO OU PARCELA COM ALTA QUAL OU SUPLENIR A ALTA QUAL DO QUADRA CORPO DO TERRENO, IMPOSIBILITANDO O ACESSO OU USO CONTÍNUO DE TERRENO ADJACENTE DO LOCAL, SEM DESTINAÇÃO INCLUSIVE À INSTALAÇÃO DE UNIDADE CONSERVADORA DE AR CONDICIONADO



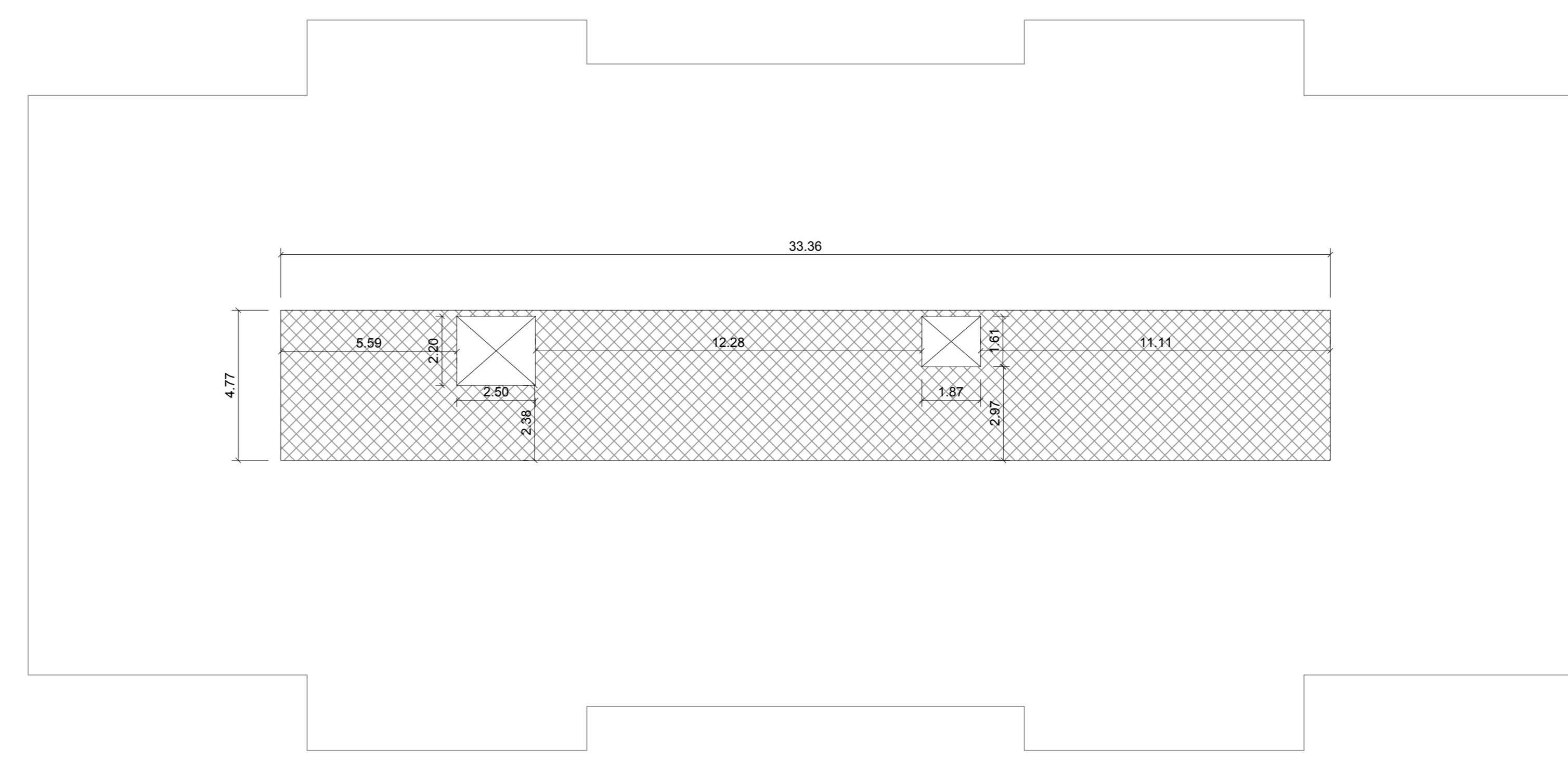
PAV. TIPO - PAVIMENTO TIPO A (X17)
ESCALA 1:125 TORRE 170 (X3)

ÁREA COMPUTÁVEL 1 = 792,53 x 17 = 13.473,01m²
 ÁREA COMPUTÁVEL 2 = 224,58 x 17 = 3.817,86m²
 ATENDE A RESOLUÇÃO Nº 01/2020 ART.2º INC. III



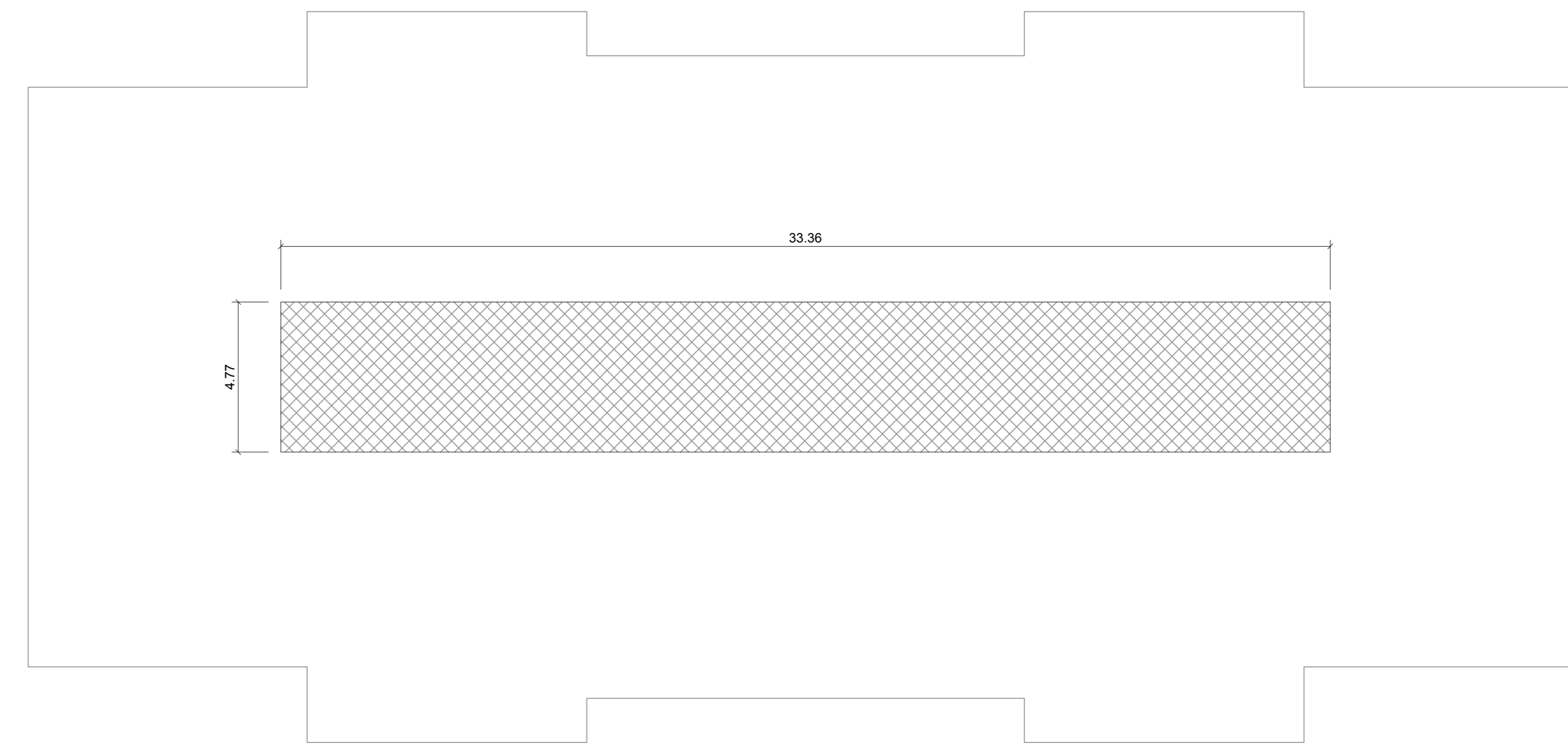
PAV. TIPO - PAVIMENTO TIPO A (X17)
ESCALA 1:125 TORRE 170 (X3)

ÁREA COMPUTÁVEL 1 = 769,17 x 17 = 13.075,89m²
 ÁREA COMPUTÁVEL 2 = 154,44 x 17 = 2.625,48m²
 ATENDE A RESOLUÇÃO Nº 01/2020 ART.2º INC. III



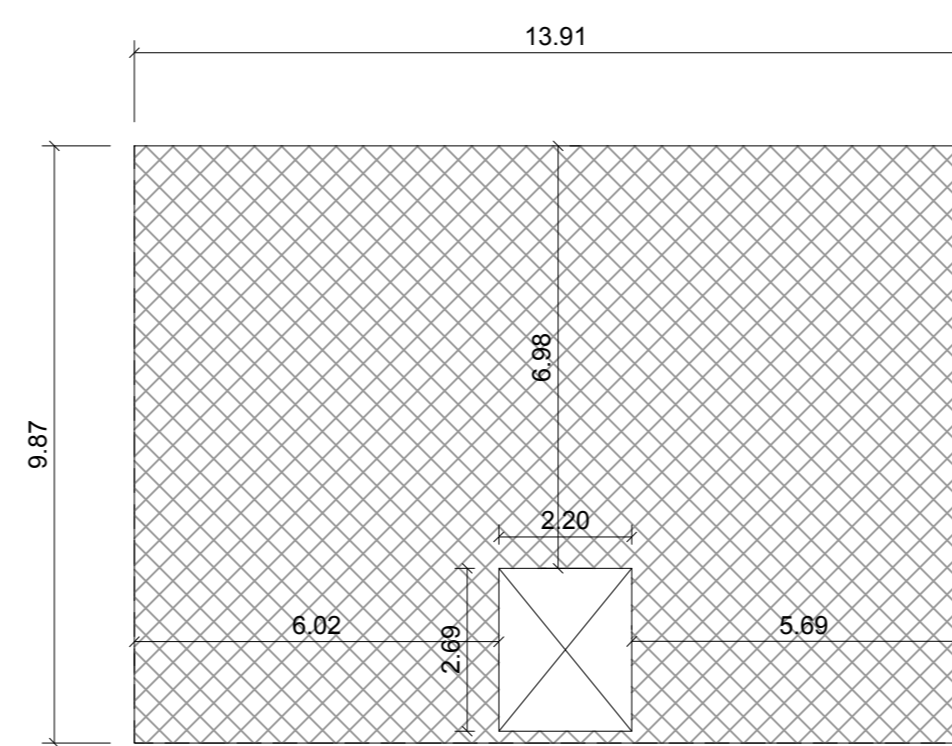
BARRILETE

ÁREA A CONSTRUIR NÃO COMPUTÁVEL = 150,61 m²



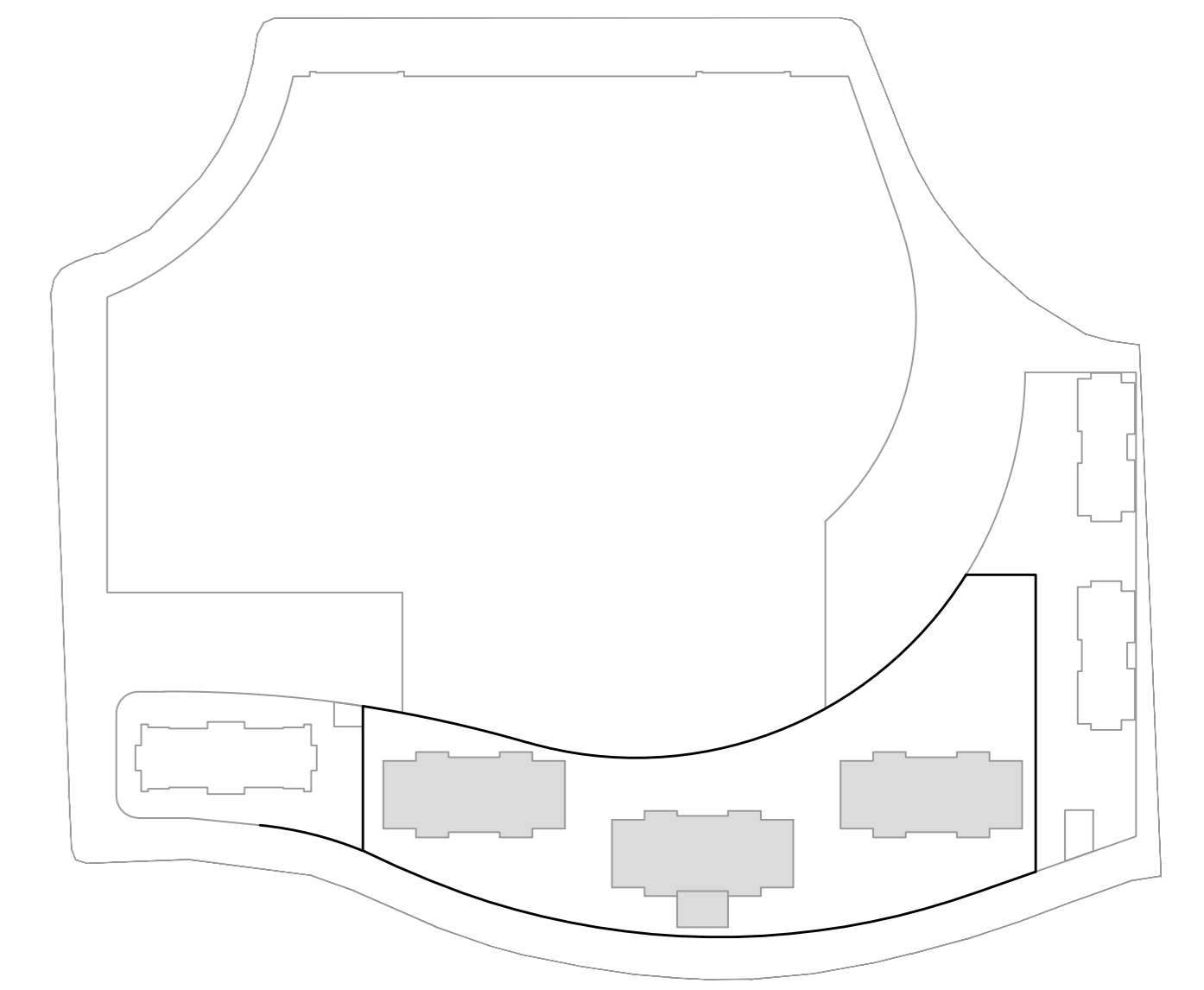
CAIXA D'AGUA

ÁREA A CONSTRUIR NÃO COMPUTÁVEL = 159,12m²



TRANSFER CONDOMÍNIO 2

ÁREA A CONSTRUIR NÃO COMPUTÁVEL = 131,37m²



PLANTA CHAVE
SEM ESCALA

RESIDENCIAL 170 - PROJETO SIMPLIFICADO FOLHA: 20/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº: 11
 LOTE: 025 - UNI QUADRA: QUARTEIRÃO: 1867

| Nº DE QUADROS/UNIDADES | | TOTAL QUADROS | Nº BARRILHES/UNIDADES | TOTAL BARRILHES | TOTAL UNIDADES |
|------------------------|----|---------------|-----------------------|-----------------|----------------|
| RESIDENCIAL | 01 | 01 | 01 | 01 | 01 |
| COMERCIAL | 01 | 01 | 01 | 01 | 01 |
| HOTEL | 01 | 01 | 01 | 01 | 01 |
| TOTAL | 03 | 03 | 03 | 03 | 03 |

DECLARAÇÕES:

DECLARO QUE A APROVAÇÃO DO PROJETO PELA PREFEITURA NÃO IMPLICA NO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRELO.

DECLARO PARA OS SERVIÇOS FISCIS DE DIREITO, QUE ESTO PROJETO NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL, NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL, NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL, NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL.

DECLARO QUE:

1. A OBRA NÃO É DE INTERESSE PÚBLICO, NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL, NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL, NÃO SE ENQUADRA NA SUPLENÇÃO DO ESTATUTO DO IMÓVEL.
2. QUALQUER ALTERAÇÃO AO PROJETO SERÁ IMEDIATAMENTE COMUNICADA À F.M.C.

RESERVADO PARA P.M.C.



CORTE AA - SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:200

1. ESTE PROJETO FOI ANALISADO COMPARADO ESTABELECIDO NO DECRETO MUNICIPAL N. 18.701/11.
 2. O DESENVOLVEDOR DEVE ADOPTAR AS MEDIDAS NECESSARIAS PARA GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO.
 3. ESTE PROJETO DEVE SER EXECUTADO DE ACORDO COM O PROJETO DE EXECUÇÃO DE OBRAS E SERVIÇOS DE ENGENHARIA DE ARQUITETURA E URBANISMO.
 4. O DESENVOLVEDOR DEVE GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO DURANTE A CONSTRUÇÃO E A EXPLOATAÇÃO DO MESMO.
 5. O DESENVOLVEDOR DEVE GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO DURANTE A CONSTRUÇÃO E A EXPLOATAÇÃO DO MESMO.
 6. O DESENVOLVEDOR DEVE GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO DURANTE A CONSTRUÇÃO E A EXPLOATAÇÃO DO MESMO.

CORTE BB - PROJETO SIMPLIFICADO FOLHA: 23/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº: 11
 LOTE: 025 - UNI QUADRA: QUARTEIRÃO: 1867
 LOTEAMENTO: ZONA: ZC4

| PROFUNDIDADE (M) | ÁREA (M²) | VALOR (R\$) |
|------------------|-----------|-------------|
| 0,00 | 1.200,00 | 120.000,00 |
| 0,50 | 1.100,00 | 110.000,00 |
| 1,00 | 1.000,00 | 100.000,00 |
| 1,50 | 900,00 | 90.000,00 |
| 2,00 | 800,00 | 80.000,00 |
| 2,50 | 700,00 | 70.000,00 |
| 3,00 | 600,00 | 60.000,00 |
| 3,50 | 500,00 | 50.000,00 |
| 4,00 | 400,00 | 40.000,00 |
| 4,50 | 300,00 | 30.000,00 |
| 5,00 | 200,00 | 20.000,00 |
| 5,50 | 100,00 | 10.000,00 |
| 6,00 | 50,00 | 5.000,00 |
| 6,50 | 20,00 | 2.000,00 |
| 7,00 | 10,00 | 1.000,00 |
| 7,50 | 5,00 | 500,00 |
| 8,00 | 2,00 | 200,00 |
| 8,50 | 1,00 | 100,00 |
| 9,00 | 0,50 | 50,00 |
| 9,50 | 0,20 | 20,00 |
| 10,00 | 0,10 | 10,00 |

DECLARAÇÕES:
 1. O DESENVOLVEDOR DEVE GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO DURANTE A CONSTRUÇÃO E A EXPLOATAÇÃO DO MESMO.
 2. O DESENVOLVEDOR DEVE GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO DURANTE A CONSTRUÇÃO E A EXPLOATAÇÃO DO MESMO.
 3. O DESENVOLVEDOR DEVE GARANTIR A SEGURANÇA E A SAÚDE DOS OCUPANTES DO EDIFÍCIO DURANTE A CONSTRUÇÃO E A EXPLOATAÇÃO DO MESMO.

RESERVADO PARA P.M.C.



ELEVAÇÃO A - AVENIDA PRINCESA D'OESTE
SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:200

ELEVAÇÃO - PROJETO SIMPLIFICADO FOLHA: 24/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI
SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº 11

LOTE: 025 - LINI QUADRA: QUARTEIRÃO: 1867

LOTEAMENTO: ZONA: ZC4

| N.º DE CONDIÇÕES | INDICADOR | TOTAL OBRIGATORIAS | | N.º OBRIGATORIAS | | TOTAL BARRIDOS | | TOTAL INDIVISOS | |
|------------------|----------------------------|--------------------|-----------|------------------|-----------|----------------|-----------|-----------------|-----------|
| | | CONDIÇÕES | INDICADOR | CONDIÇÕES | INDICADOR | CONDIÇÕES | INDICADOR | CONDIÇÕES | INDICADOR |
| 01 | RESTRICÇÃO DE USO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 02 | RESTRICÇÃO DE ALTURA | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 03 | RESTRICÇÃO DE COBERTURA | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 04 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 05 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 06 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 07 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 08 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 09 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 10 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 11 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 12 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 13 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 14 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 15 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 16 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 17 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 18 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 19 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 20 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 21 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 22 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 23 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 24 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 25 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 26 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 27 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 28 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 29 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 30 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 31 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 32 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 33 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 34 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 35 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 36 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 37 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 38 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 39 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 40 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 41 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 42 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 43 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 44 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 45 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 46 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 47 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 48 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 49 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |
| 50 | RESTRICÇÃO DE REVESTIMENTO | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 |

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

PROPRIETÁRIO: [NOME] [ENDEREÇO] [Cidade] [Estado] [País]

DECLARAÇÃO PARA OS DEVEDORES DE DIREITO, INCLUSIVE NA ESPERA DE PAGAMENTO, DE QUE O PROJEITO EM ANEXO CONFORMA A LEGISLAÇÃO DEBIDA E VIGENTE, INCLUSIVE A DE ADEQUAÇÃO PARA O USO DO TERRENO EM BOM.

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

DECLARAÇÃO DE APROVAÇÃO DO PROJETO PARA A PRETENSÃO DO EMPILHAMENTO DO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO

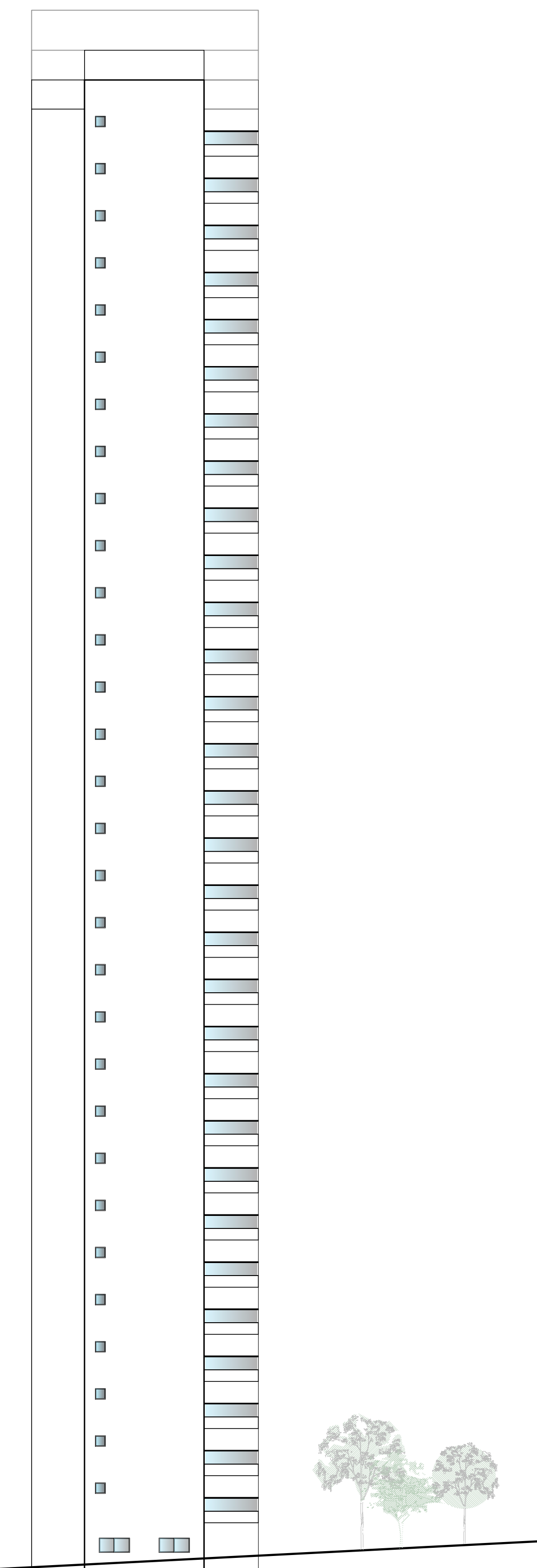
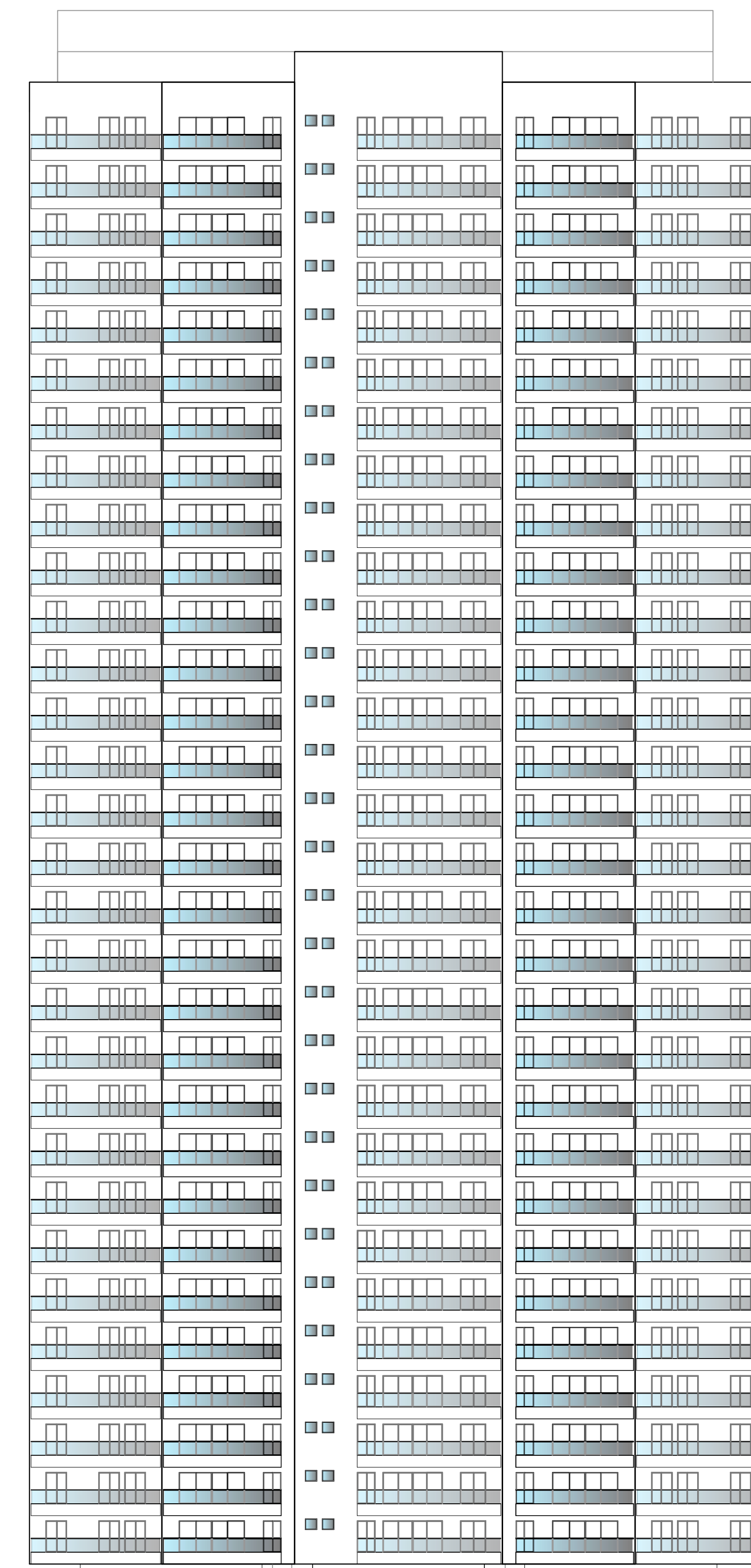
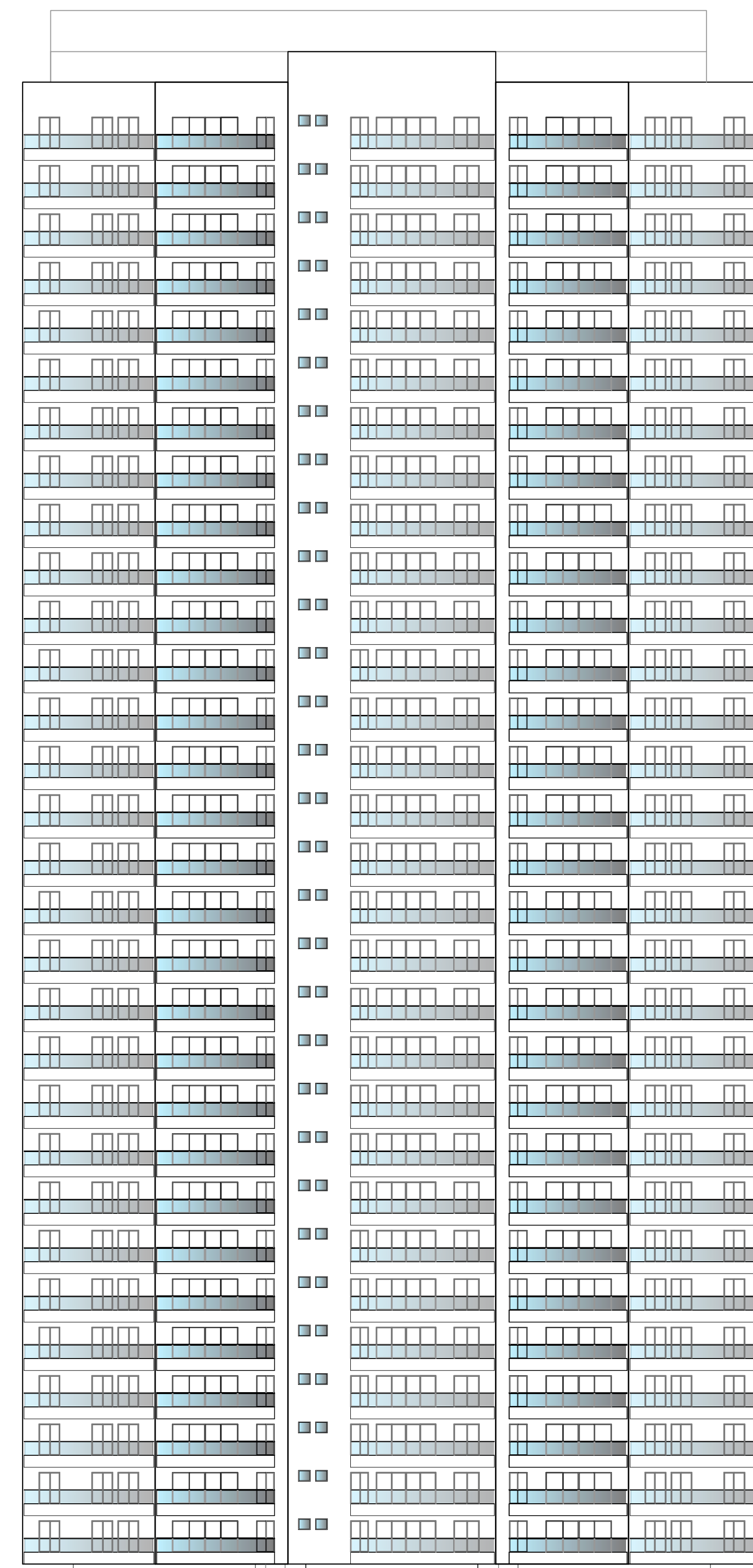
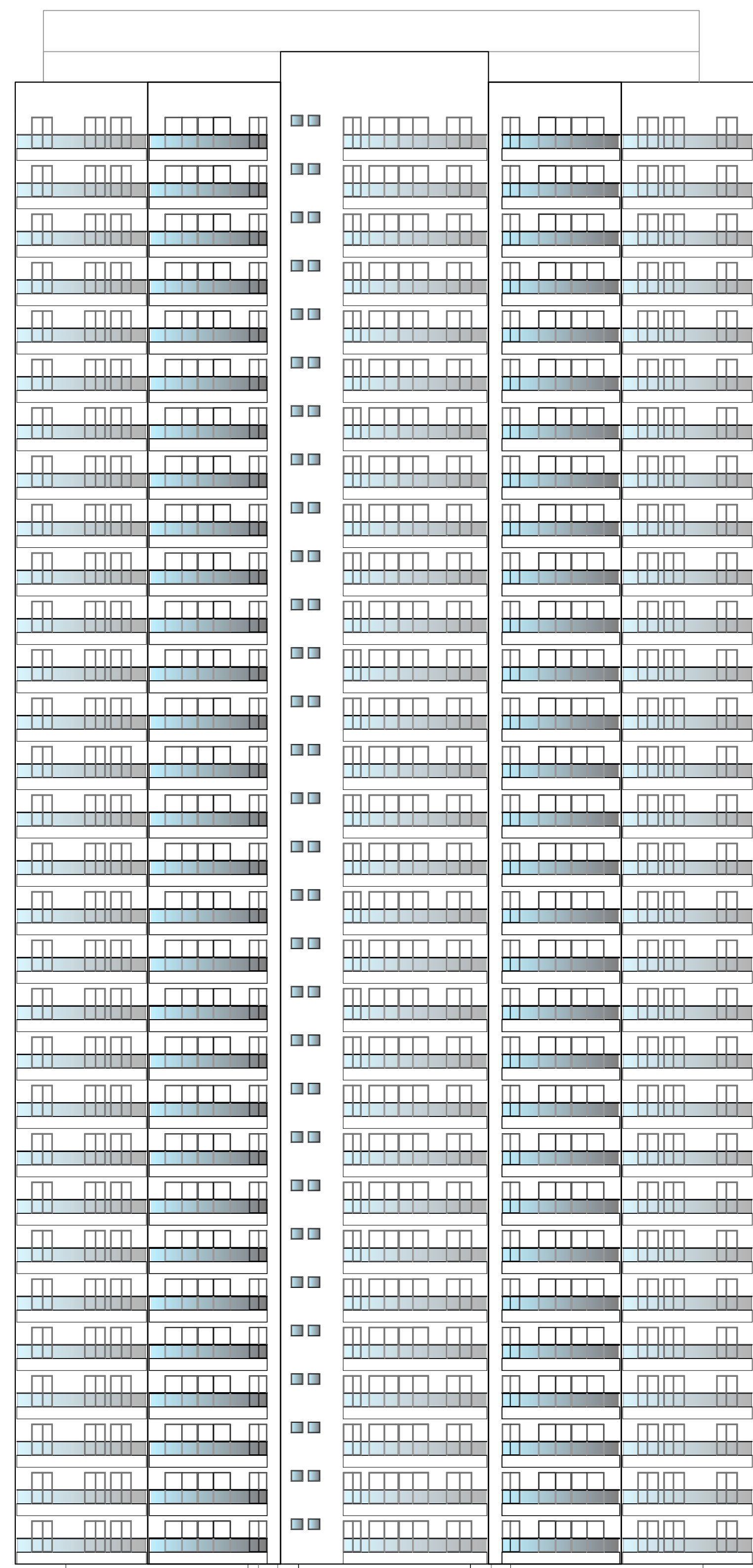
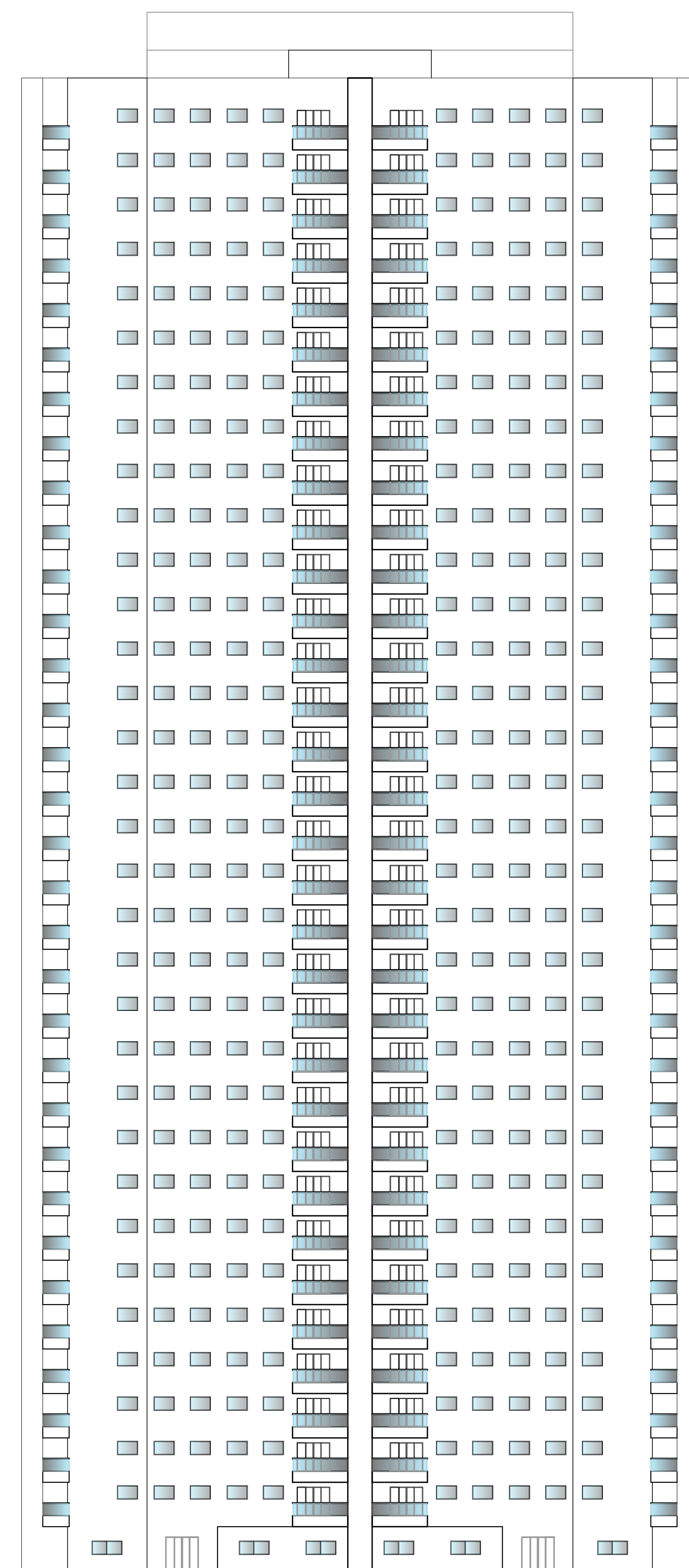
1. ESTE PROJETO FOI ANALISADO SOB O PUNTO DE VISTA DA LEGISLAÇÃO DA ZONA URBANA, NÃO SE RESPONSABILIZANDO O ARQUITETO POR POSSÍVEIS VIOLACIONES DE OUTRAS LEIS, COMO AS DE PROTEÇÃO DO PATRIMÔNIO HISTÓRICO, AMBIENTAL, CULTURAL, ENTRE OUTRAS.

2. O ESTABELECIMENTO DA ALTURA EM NENHUMA DAS PARTES DO PROJETO NÃO SE RESPONSABILIZA POR POSSÍVEIS VIOLACIONES DE OUTRAS LEIS, COMO AS DE PROTEÇÃO DO PATRIMÔNIO HISTÓRICO, AMBIENTAL, CULTURAL, ENTRE OUTRAS.

3. ESTE PROJETO NÃO SE RESPONSABILIZA POR POSSÍVEIS VIOLACIONES DE OUTRAS LEIS, COMO AS DE PROTEÇÃO DO PATRIMÔNIO HISTÓRICO, AMBIENTAL, CULTURAL, ENTRE OUTRAS.

4. A PRESENÇA DE RESTRICÇÕES DE REVESTIMENTO EM QUALQUER PARTE DO TERRENO NÃO SE RESPONSABILIZA POR POSSÍVEIS VIOLACIONES DE OUTRAS LEIS, COMO AS DE PROTEÇÃO DO PATRIMÔNIO HISTÓRICO, AMBIENTAL, CULTURAL, ENTRE OUTRAS.

5. A PRESENÇA DE RESTRICÇÕES DE REVESTIMENTO EM QUALQUER PARTE DO TERRENO NÃO SE RESPONSABILIZA POR POSSÍVEIS VIOLACIONES DE OUTRAS LEIS, COMO AS DE PROTEÇÃO DO PATRIMÔNIO HISTÓRICO, AMBIENTAL, CULTURAL, ENTRE OUTRAS.



ELEVAÇÃO C - AVENIDA GUARANI
SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:250

ELEVAÇÃO - PROJETO SIMPLIFICADO FOLHA: 26/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI
SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº 11
LOTE: 025 - LINI QUADRA: QUARTEIRÃO: 1867 ZONA: ZC4

| Nº DE CONDIÇÕES | ÍNDICES | TOTAL OBRIGATORIAS | | Nº DE OBRIGATORIAS | | TOTAL BARRIDOS | | TOTAL INDEVIDOS | |
|-----------------|---------|--------------------|---------|--------------------|---------|----------------|---------|-----------------|---------|
| | | CONDIÇÕES | ÍNDICES | CONDIÇÕES | ÍNDICES | CONDIÇÕES | ÍNDICES | CONDIÇÕES | ÍNDICES |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

DECLARAÇÕES:

DECLARO QUE A APROVAÇÃO DO PROJETO PELA PREFEITURA NÃO IMPLICA NO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO.

PROPRIETÁRIO:
NOME: [NOME DO PROPRIETÁRIO]
RUA: [RUA DO PROPRIETÁRIO] Nº [NÚMERO]
Cidade: [CIDADE] - SP

DECLARO PARA OS DEVIDOS FINS DE DIREITO, INCLUSIVE NA ESPERA DE FORMALIZAÇÃO DO PROJETO DE LICENCIAMENTO, QUE O TERRENO EM DESTAQUE É DE MINHA PROPRIEDADE E QUE NÃO POSSUO OBRIGAÇÕES DE SERVIÇOS, FISCALIS, QUANDO NECESSÁRIAS.

DECLARO QUE:

1. A OBRIGAÇÃO DE LICENCIAMENTO DE ACORDO COM O PROJETO DE LICENCIAMENTO, NÃO SE ENQUADRA EM NECESSIDADE DE LICENCIAMENTO DE SERVIÇOS, FISCALIS, QUANDO NECESSÁRIAS.

2. QUALQUER ALTERAÇÃO DO PROJETO SERÁ RELEVANTEMENTE CONCORDADA A P.M.C.

DECLARO QUE:

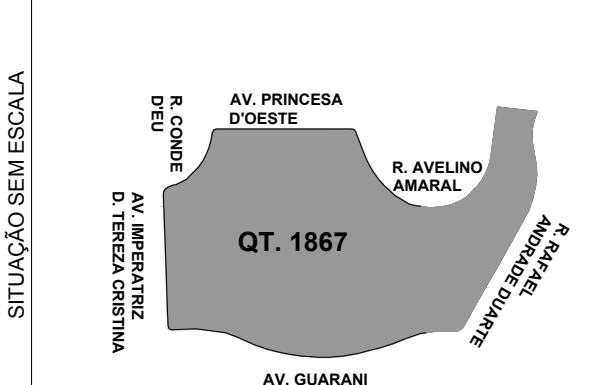
1. A OBRIGAÇÃO DE LICENCIAMENTO DE ACORDO COM O PROJETO DE LICENCIAMENTO, NÃO SE ENQUADRA EM NECESSIDADE DE LICENCIAMENTO DE SERVIÇOS, FISCALIS, QUANDO NECESSÁRIAS.

2. QUALQUER ALTERAÇÃO DO PROJETO SERÁ RELEVANTEMENTE CONCORDADA A P.M.C.

DECLARO QUE:

1. A OBRIGAÇÃO DE LICENCIAMENTO DE ACORDO COM O PROJETO DE LICENCIAMENTO, NÃO SE ENQUADRA EM NECESSIDADE DE LICENCIAMENTO DE SERVIÇOS, FISCALIS, QUANDO NECESSÁRIAS.

2. QUALQUER ALTERAÇÃO DO PROJETO SERÁ RELEVANTEMENTE CONCORDADA A P.M.C.



RESERVADO PARA P.M.C.



ELEVAÇÃO D
SHOPPING / COMERCIAL / HOTEL / RESIDENCIAL
ESCALA 1:200

ELEVAÇÃO - PROJETO SIMPLIFICADO FOLHA: 27/27

CONSTRUÇÃO MISTA DE HABITAÇÃO MULTIFAMILIAR VERTICAL E NÃO HABITACIONAL - HCSEI
SHOPPING CENTER, EDIFÍCIOS COMERCIAIS E HOTEL

LOCAL: AV. IMPERATRIZ D. TEREZA CRISTINA, CAMPINAS - SP Nº 11
LOTE: 025 - LUNI QUADRA: QUARTERÃO: 1867

| L. LOCALIZAÇÃO / ZONAMENTO | | LOTEAMENTO | | ZONA: ZC4 | |
|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|
| Nº DE OBRAS | 1 | Nº DE OBRAS | 1 | Nº DE OBRAS | 1 |
| TIPO DE OBRAS | EDIFÍCIO | TIPO DE OBRAS | EDIFÍCIO | TIPO DE OBRAS | EDIFÍCIO |
| ÁREA TOTAL | 10.000,00 | ÁREA TOTAL | 10.000,00 | ÁREA TOTAL | 10.000,00 |
| ÁREA ÚTIL | 8.000,00 | ÁREA ÚTIL | 8.000,00 | ÁREA ÚTIL | 8.000,00 |
| ÁREA COBERTA | 10.000,00 | ÁREA COBERTA | 10.000,00 | ÁREA COBERTA | 10.000,00 |
| ÁREA DE PAVIMENTO | 10.000,00 | ÁREA DE PAVIMENTO | 10.000,00 | ÁREA DE PAVIMENTO | 10.000,00 |
| ÁREA DE PAVIMENTO DE PAVIMENTO | 10.000,00 | ÁREA DE PAVIMENTO DE PAVIMENTO | 10.000,00 | ÁREA DE PAVIMENTO DE PAVIMENTO | 10.000,00 |

DECLARAÇÕES:

DECLARO QUE A APROVAÇÃO DO PROJETO PELA PREFEITURA NÃO IMPLICA NO RECONHECIMENTO DO DIREITO DE PROPRIEDADE DO TERRENO.

PROPRIETÁRIO:
EMPRESA: S&S CONSULTORIA E ASSISTORIA
RUA: S&S CONSULTORIA - 100 - 13061-100 - CAMPINAS - SP
AUTORIZAÇÃO:

DECLARO PARA OS DEVIDOS FINS DE DIREITO, INCLUSIVE NA ESPERA DE APROVAÇÃO PELA FAZENDA PÚBLICA, QUE ESTOURE PRECISANDO A APROVAÇÃO DELOCAÇÃO VENTILADA INCLUSIVE A DE APROVAÇÃO PARA O CASO DE FORTUITO DELOCAÇÃO.

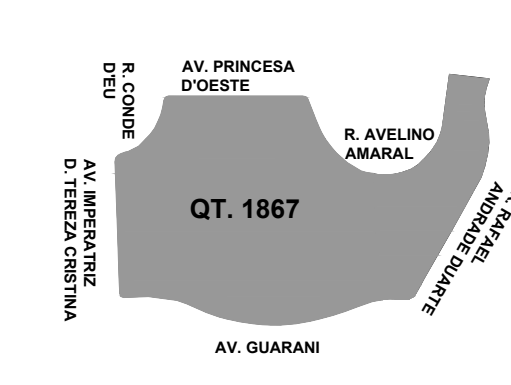
DECLARO QUE:
1. A OBRAS NÃO ENVIADA DE ACORDO COM O PROJETO APROVADO PELA FAZENDA PÚBLICA, ESTOURE PRECISANDO A APROVAÇÃO DELOCAÇÃO VENTILADA INCLUSIVE A DE APROVAÇÃO PARA O CASO DE FORTUITO DELOCAÇÃO.
2. QUALQUER ALTERAÇÃO AO PROJETO SERA MEDIAMENTE CONCORDADA PELA FAZENDA PÚBLICA.

DECLARO QUE:
1. A OBRAS NÃO ENVIADA DE ACORDO COM O PROJETO APROVADO PELA FAZENDA PÚBLICA, ESTOURE PRECISANDO A APROVAÇÃO DELOCAÇÃO VENTILADA INCLUSIVE A DE APROVAÇÃO PARA O CASO DE FORTUITO DELOCAÇÃO.
2. QUALQUER ALTERAÇÃO AO PROJETO SERA MEDIAMENTE CONCORDADA PELA FAZENDA PÚBLICA.

DECLARO QUE:
1. A OBRAS NÃO ENVIADA DE ACORDO COM O PROJETO APROVADO PELA FAZENDA PÚBLICA, ESTOURE PRECISANDO A APROVAÇÃO DELOCAÇÃO VENTILADA INCLUSIVE A DE APROVAÇÃO PARA O CASO DE FORTUITO DELOCAÇÃO.
2. QUALQUER ALTERAÇÃO AO PROJETO SERA MEDIAMENTE CONCORDADA PELA FAZENDA PÚBLICA.

DECLARO QUE:
1. A OBRAS NÃO ENVIADA DE ACORDO COM O PROJETO APROVADO PELA FAZENDA PÚBLICA, ESTOURE PRECISANDO A APROVAÇÃO DELOCAÇÃO VENTILADA INCLUSIVE A DE APROVAÇÃO PARA O CASO DE FORTUITO DELOCAÇÃO.
2. QUALQUER ALTERAÇÃO AO PROJETO SERA MEDIAMENTE CONCORDADA PELA FAZENDA PÚBLICA.

DECLARO QUE:
1. A OBRAS NÃO ENVIADA DE ACORDO COM O PROJETO APROVADO PELA FAZENDA PÚBLICA, ESTOURE PRECISANDO A APROVAÇÃO DELOCAÇÃO VENTILADA INCLUSIVE A DE APROVAÇÃO PARA O CASO DE FORTUITO DELOCAÇÃO.
2. QUALQUER ALTERAÇÃO AO PROJETO SERA MEDIAMENTE CONCORDADA PELA FAZENDA PÚBLICA.



RESERVADO PARA P.M.C.

1. ESTE PROJETO FOI ANALISADO SOB O PUNTO DE VISTA DA LEGISLAÇÃO MUNICIPAL Nº 11.707/11.
2. OS ESTABELECIMENTOS A INSTALAR EM NESTA OBRAS DEVE SE SUJEITOS ÀS RESTRIÇÕES DE USO E DE ZONAMENTO DEVE SE SUJEITOS ÀS RESTRIÇÕES DE USO E DE ZONAMENTO DA CÂMARA MUNICIPAL DE CAMPINAS.
3. ESTE PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.
4. A REALIZAÇÃO DE OBRAS DE RECONSTRUÇÃO DEVE SE SUJEITOS ÀS RESTRIÇÕES DE USO E DE ZONAMENTO DA CÂMARA MUNICIPAL DE CAMPINAS.
5. O PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.
6. O PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.
7. O PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.
8. O PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.
9. O PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.
10. O PROJETO NÃO TEM A NENHUMA RESTRIÇÃO DE USO E DE ZONAMENTO.

