3056 Neyagawa Boulevard

Traffic Impact Study

Neatt (16 Mile Creek) Inc.

30 March 2026

The Power of Commitment

Project name		3056 Neyagawa Boulevard Mixed-Use Development TIS					
Document title		Traffic Impact Study					
Project number		12640446					
File name		3056 Neyagawa TIS_March2026.docx					
Status Code	**Revision**	**Author**	**Reviewer**		**Approved for issue**		
			Name	**Signature**	**Name**	**Signature**	**Date**
S4	01	Raf Andrenacci	Will Maria		Will Maria		2024-12-12
S4	02	Raf Andrenacci	Will Maria		Benjamin Loucks		2026-03-20

GHD Ltd

100 Milverton Drive, Suite 404

Mississauga, Ontario L5R 4H1, Canada

T +1 416 213 7121 | **F** +1 905 890 8499 | **E** info-northamerica@ghd.com | **ghd.com**

© GHD 2026

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Executive Summary

GHD Limited is pleased to provide the following updated Traffic Impact Study for a proposed mixed-use development located on lands municipally known as 3056 Neyagawa Boulevard in the Town of Oakville.

This updated report reflects an updated site plan, including a reduction in the total unit count. Town and Region staff reviewed the first submission, dated December 2024, and deemed the study acceptable with Town staff only seeking confirmation that the proposed dual left-turn lanes can be accommodated at the intersection of Dundas Street West and Neyagawa Boulevard.

This report determines the site related traffic and subsequent traffic related impacts on the adjacent road network and site driveways during the weekday a.m. and p.m. peak hours. These impacts are based on the projected future background traffic and road network conditions derived for a 2030, 2032, and 2035 future planning horizon year.

Based on the approved Terms of Reference for the study, the following intersections were included in the study area:

- Existing
  - Dundas Street West and Neyagawa Boulevard
  - Neyagawa Boulevard and Sixteen Mile Drive
- New
  - Dundas Street West and Street A (Right-in/Right-out)
  - Sixteen Mile Drive and Street A
  - Sixteen Mile Drive and Street B
  - Street A and Street B
  - Neyagawa Boulevard and Block 1 access (Right-in/Right-out)
  - Street B and Block 1 access/Block 2 access
  - Sixteen Mile Drive and Block 2 access
  - Street B and Block 3 access

The proposed site plan prepared by Core Architects consists of a residential development within 3 blocks containing 7 high-rise buildings with a total of 2,178 dwelling units and 1,503 m^2 of retail GFA. The breakdown between the three blocks is as follows:

- Block 1
  - Building 1: 371 dwelling units, 1,032 m^2 of retail GFA
  - Building 2: 274 dwelling units
- Block 2
  - Building 3: 266 dwelling units, 471 m^2 of retail GFA
  - Building 4: 340 dwelling units
  - Building 5: 365 dwelling units
- Block 3
  - Building 6: 216 dwelling units
  - Building 7: 346 dwelling units

Access to the subject site is proposed via two new roads (Street A and Street B) and a proposed right-in/right-out access to Block 1 on Neyagawa Boulevard. Additional accesses are provided to the three blocks from Sixteen Mile Drive and Street B.

Based on ITE Trip Generation rates, the subject site is expected to generate a total of 488 two-way vehicle trips during the a.m. peak hour consisting of 154 inbound and 334 outbound trips. During the p.m. peak hour, it is expected to generate 652 new two-way vehicle trips consisting of 384 inbound and 268 outbound trips.

Under existing traffic conditions, all intersections are operating at acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours.

Under the 2030 future background conditions, with the addition of corridor growth, background development traffic, and the conversion of one through lane in each direction to an HOV lane on Dundas Street West, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

Under the 2030 future total conditions, with the addition of site traffic from the first phase of construction, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

Under the 2032 future background conditions, with the addition of corridor growth, background development traffic, and the conversion of one through lane in each direction to an HOV lane on Dundas Street West, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

Under the 2032 future total conditions, with the addition of site traffic from the first two phases of construction, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

Under the 2035 future background conditions, with the addition of corridor growth, background development traffic, and the conversion of one through lane in each direction to an HOV lane on Dundas Street West, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

Under the 2035 future total conditions, with the addition of site traffic from the full build-out of the site, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

A sensitivity analysis was completed for the intersection of Dundas Street West and Neyagawa Boulevard to include a dual left-turn lane in the eastbound and northbound approaches. The provision of the dual left-turn lane mitigates the over-capacity operation of all movements with the exception of the westbound through movement during the p.m. peak hour under the 2035 horizon year.

Application of the Town of Oakville By-Law 2009-189 parking rates to the subject site results in a requirement of up to 2,723 vehicle parking spaces for residents, a minimum of 435 parking spaces for visitors, and a minimum of 50 spaces and a maximum of 76 spaces for the retail uses. Of the parking spaces required, a minimum of 53 barrier free spaces is required. A minimum of 600 bicycle parking spaces (450 resident spaces and 150 visitor spaces) are required for the subject site.

The subject site provides a total of 2,284 resident vehicle parking spaces and 499 visitor spaces, shared between the residential visitor and non-residential uses. Of the parking spaces provided, 95 barrier free spaces are provided. 1,457 bicycle parking spaces and 7 loading spaces are also provided. All vehicular parking, bicycle parking, and loading space requirements are met.

The Town’s design standards require accesses to be designed with a minimum width of 7.5 metres and a maximum width of 9.0 metres with its minimum curb return radii required to be a minimum of 6.0 metres and a maximum of 7.5 metres. The Region’s design standards require accesses to be designed with a minimum width of 3.5 metres and a maximum width of 7.5 metres with its minimum curb return radii required to be a minimum of 1.5 metres and a

maximum of 4.5 metres. The subject site proposes to include two accesses onto Regional roads and four accesses onto existing or proposed Town roads that satisfy the Town and Region guidelines.

TDM measures are proposed for the subject site to encourage employees to explore various modes of transportation in order to reduce their dependency on single occupancy vehicle trips. These measures include bicycle parking and education material.

GHD assessed the site circulation for emergency vehicles, MSU trucks, waste collection vehicles, and passenger vehicles and confirmed no issues with the site circulation.

A pavement marking and signage plan has been prepared for the subject site identifying the required signage and pavement markings.

The traffic study confirms that the proposed residential development can be accommodated on the existing/planned road network.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions.

Sincerely,

GHD





Rafael Andrenacci, B.Eng

Transportation Planner

William Maria, P. Eng.

Transportation Planning Lead

Contents

1. Introduction **1**
1.1 Retainer and Objective 1
1.2 Study Team 1

2. Site Characteristics **2**
2.1 Study Area 2
2.2 Proposed Development Content 2

3. Existing Conditions **3**
3.1 Existing Road Network 3
3.2 Pedestrian and Bicycle Facilities 4
3.3 Transit Services 5
3.4 Existing Traffic Data 6

4. Future Conditions **7**
4.1 Study Horizon Year 7
4.2 Corridor Growth 7
4.3 Background Development Traffic 8
4.4 Roadway Improvements 10
4.5 Future Background Traffic Volumes 10

5. Site Generated Traffic **13**
5.1 Modal Split 13
5.2 Site Trip Generation 14
5.3 Site Traffic Distribution and Assignment 16
5.4 Traffic Redistribution 20

6. Future Total Traffic **20**

7. Capacity Analysis **23**
7.1 Dundas Street West and Neyagawa Boulevard 24
7.1.1 Sensitivity Analysis 26
7.2 Neyagawa Boulevard and Sixteen Mile Drive 30
7.3 Dundas Street West and Street A 32
7.4 Sixteen Mile Drive and Street A 32
7.5 Sixteen Mile Drive and Street B 33
7.6 Street A and Street B 33
7.7 Neyagawa Boulevard and Block 1 Access 33
7.8 Street B and Block 1 Access/Block 2 Access 34
7.9 Sixteen Mile Drive and Block 2 Access 34
7.10 Street B and Block 3 Access 35

8. Parking Review **35**
8.1 Town of Oakville By-Law 2009-189 35

8.1.1 Vehicular Parking 35
8.1.2 Accessible Parking 36
8.1.3 Bicycle Parking 37
8.1.4 Loading Spaces 38
8.2 Proposed Site Parking 38
9. Site Plan Review 38
9.1 Access Width and Radii 38
10. Travel Demand Management 39
10.1 Travel Demand Management 39
10.2 Existing TDM Opportunities 39
10.3 Recommended TDM Measures 39
11. Pedestrian Circulation Plan 40
12. Bicycle Parking Plan 41
13. Vehicle Swept Path Analysis 44
14. Pavement Marking and Signage Plan 44
15. Conclusion 44

Table Index

Table 1 Background Development Traffic 9
Table 2 Existing Mode Split 14
Table 3 Total Site Trip Generation 15
Table 4 Site Traffic Distribution 16
Table 5 Capacity analysis of Dundas Street West and Neyagawa Boulevard 24
Table 6 Capacity analysis of Dundas Street West and Neyagawa Boulevard (Sensitivity Analysis) 27
Table 7 Capacity analysis of Neyagawa Boulevard and Sixteen Mile Drive 30
Table 8 Capacity analysis of Dundas Street West and Street A 32
Table 9 Capacity analysis of Sixteen Mile Drive and Street A 32
Table 10 Capacity analysis of Sixteen Mile Drive and Street B 33
Table 11 Capacity analysis of Street A and Street B 33
Table 12 Capacity analysis of Neyagawa Boulevard and Block 1 Access 34
Table 13 Capacity analysis of Street B and Block 1 Access/Block 2 Access 34
Table 14 Capacity analysis of Sixteen Mile Drive and Block 2 Access 35
Table 15 Capacity analysis of Street B and Block 3 Access 35
Table 16 Parking Requirements and Provisions 38
Table 17 Recommended TDM Strategies 39

Figure Index

Figure 1	Site Location	1
Figure 2	Proposed Site Plan	3
Figure 3	Existing Lane Configuration and Traffic Controls	4
Figure 4	Existing Active Transportation Facilities	5
Figure 5	Existing Transit Routes and Transit Stops	6
Figure 6	Baseline 2024 Traffic Volumes	7
Figure 7	Location of Background Developments	8
Figure 8	Total Background Development Traffic	10
Figure 9	2030 Future Background Traffic Volumes	11
Figure 10	2032 Future Background Traffic Volumes	12
Figure 11	2035 Future Background Traffic Volumes	13
Figure 12	Phase 1 Site Trips	16
Figure 13	Phase 2 Site Trips	17
Figure 14	Phase 3 Site Trips	18
Figure 15	Total Site Trips	19
Figure 16	Street A Projected Traffic Redistribution	20
Figure 17	2030 Future Total Traffic Volumes	21
Figure 18	2032 Future Total Traffic Volumes	22
Figure 19	2035 Future Total Traffic Volumes	23
Figure 20	Preliminary Design – 50m ROW with Dual Left-turn Lanes	29
Figure 21	Preliminary Design – 42m ROW with Dual Left-turn Lanes	30
Figure 22	Pedestrian Circulation Plan	41
Figure 23	Bicycle Circulation Plan – Ground Floor	42
Figure 24	Bicycle Circulation Plan – Underground P1	43
Figure 25	Typical Bike Room Pull-down Rack	44

Appendices

Appendix A	Terms of Reference
Appendix B	Site Plan
Appendix C	Traffic Data
Appendix D	Background Development Excerpts
Appendix E	Transportation Tomorrow Survey 2016
Appendix F	Synchro Outputs
Appendix G	AutoTURN Swept Path Analysis
Appendix H	Pavement Marking and Signage Plan

1. Introduction

1.1 Retainer and Objective

GHD Limited was retained to prepare a Traffic Impact Study for a proposed mixed-use development development on lands municipally known as 3056 Neyagawa Boulevard in the Town of Oakville.

The site location is illustrated in **Figure 1**.

The purpose of this study is to:

- Establish baseline traffic conditions for the study area in 2024 and determine future background operating conditions for a future planning horizon in 2030, 2032, and 2035.
- Estimate the site trips generated by the proposed development and distribute the traffic to the adjacent road network.
- Determine future operating traffic conditions during the weekday peek periods through intersection capacity analysis.
- Conduct a site access and swept path review of the proposed site plan.
- Recommend TDM measures to reduce single occupancy vehicle trips to the site.

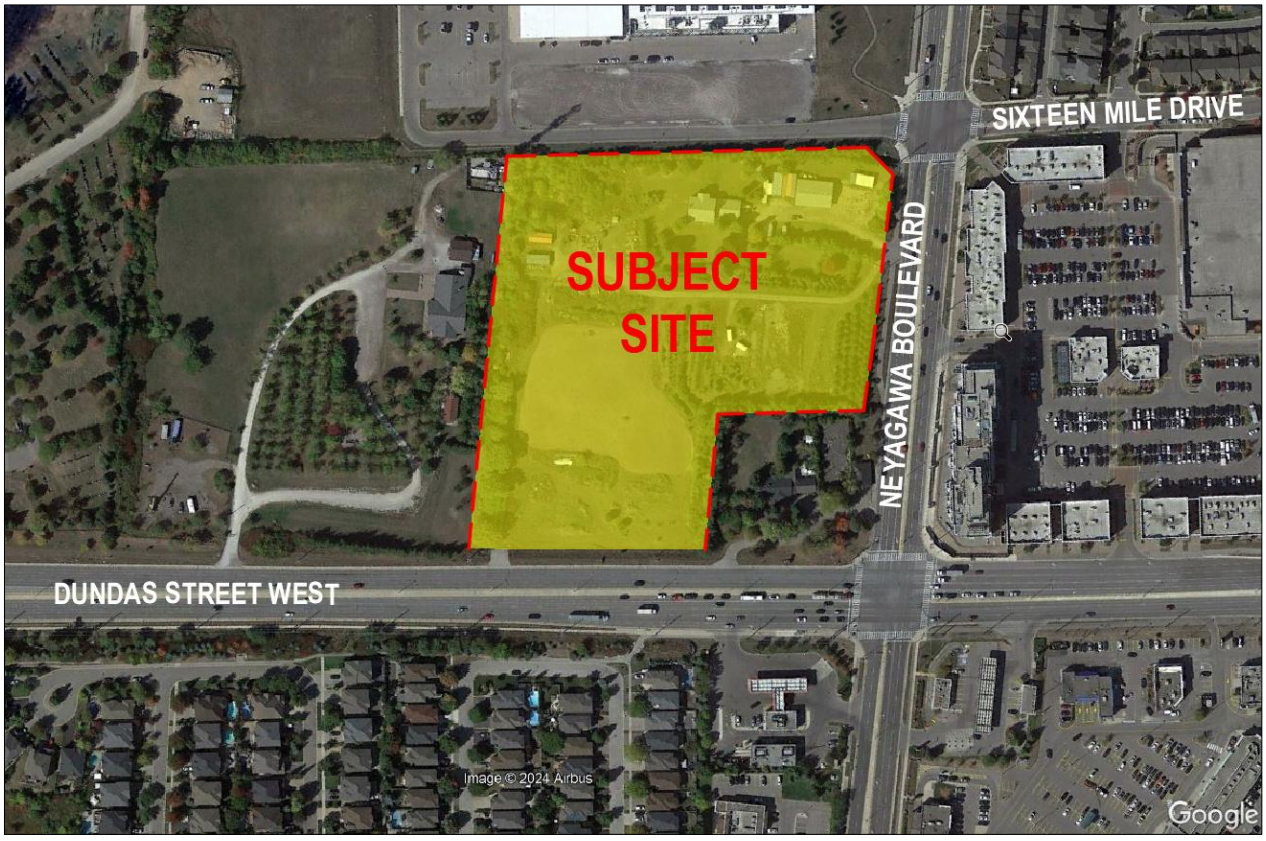


Figure 1 Site Location

1.2 Study Team

The GHD team involved in the preparation of the study are:

- William Maria, P. Eng., Transportation Planning Lead

- Rafael Andrenacci, B.Eng., Transportation Planner

2. Site Characteristics

2.1 Study Area

As per the agreed Terms of Reference for the study attached in **Appendix A**, the following intersections were included in the study area:

Existing

- Dundas Street West and Neyagawa Boulevard
- Neyagawa Boulevard and Sixteen Mile Drive

New

- Dundas Street West and Street A (Right-in/Right-out)
- Sixteen Mile Drive and Street A
- Sixteen Mile Drive and Street B
- Street A and Street B
- Neyagawa Boulevard and Block 1 access (Right-in/Right-out)
- Street B and Block 1 access/Block 2 access
- Sixteen Mile Drive and Block 2 access
- Street B and Block 3 access

2.2 Proposed Development Content

An updated site plan prepared by Core Architects is shown in **Figure 2** and provided in **Appendix B**. The proposed development consists of a total 2,178 dwelling units and 1,503 m^2 of retail GFA within 7 high-rise residential buildings located within three blocks, a reduction from the previous site plan containing 2,278 dwelling units and 1,551 m^2 of retail. The breakdown between the three blocks is as follows:

- Block 1
  - Building 1: 371 dwelling units, 1,032 m^2 of retail GFA
  - Building 2: 274 dwelling units
- Block 2
  - Building 3: 266 dwelling units, 471 m^2 of retail GFA
  - Building 4: 340 dwelling units
  - Building 5: 365 dwelling units
- Block 3
  - Building 6: 216 dwelling units
  - Building 7: 346 dwelling units

Access to the subject site is proposed via a series of new roads and accesses from the three blocks, including a new north/south Street A from the future extension of Sixteen Mile Drive to Dundas Street, a new Street B from the future extension of Sixteen Mile Drive to Street A, a right-in/right-out on Neyagawa Boulevard, and a right-in/right-out access on Dundas Street.



Figure 2 Proposed Site Plan

3. Existing Conditions

3.1 Existing Road Network

Dundas Street West is an east-west major arterial road under the jurisdiction of the Region of Halton. In the study area it has a six-lane urban cross section. The existing intersection of Dundas Street West and Neyagawa Boulevard is signalized, with an auxiliary right-turn and an auxiliary left-turn lane in the eastbound and westbound directions. The posted speed limit on Dundas Street West is 70 km/h.

Neyagawa Boulevard is north-south major collector road under the jurisdiction of Halton Region that extends from Highway 407 to Upper Middle Road West. It currently has a four-lane cross-section with a posted speed of 60 km/h. The intersection of Dundas Street West and Neyagawa Boulevard is signalized, with an auxiliary left-turn lane in the northbound and southbound directions. The intersection of Sixteen Mile Drive and Neyagawa Boulevard is signalized with auxiliary left-turn lanes provided in the northbound and southbound directions.

Sixteen Mile Drive is an east-west minor collector road under the jurisdiction of the Town of Oakville that extends from Neyagawa Boulevard in the west to Sixth Line in the east, and continues west of Neyagawa as an access to the Sixteen Mile Sports Complex. The existing intersection of Sixteen Mile Drive and Neyagawa Boulevard is signalized, with no provision of auxiliary turning lanes in the eastbound and westbound directions. It currently has a two-lane cross-section with a posted speed of 50 km/h.

The existing lane configurations and intersection control are shown in the figure below.

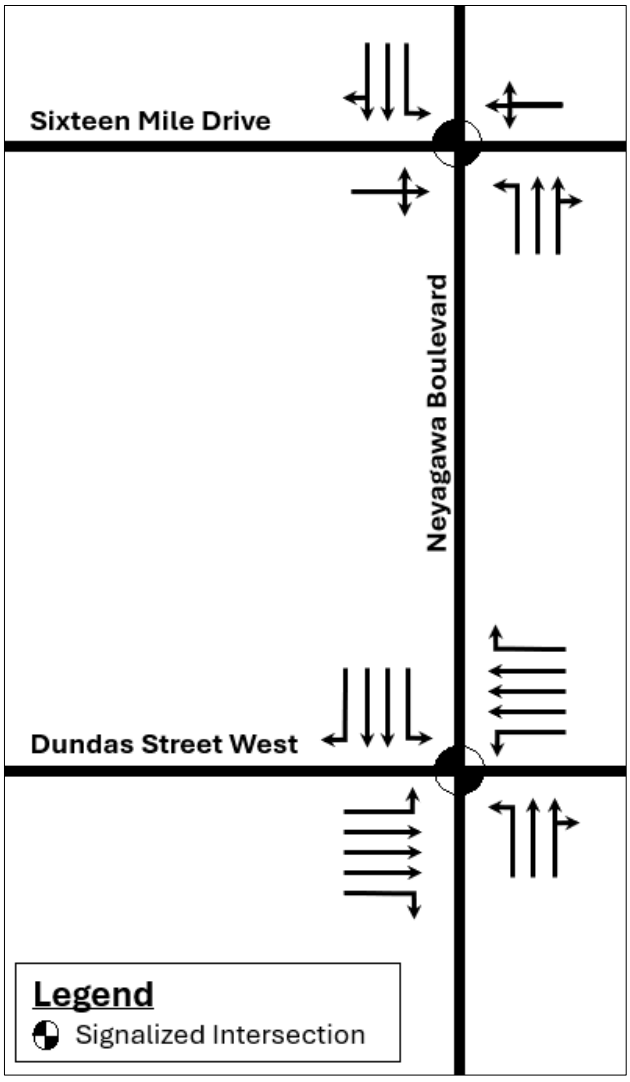


Figure 3 Existing Lane Configuration and Traffic Controls

3.2 Pedestrian and Bicycle Facilities

Within the study area, pedestrian infrastructure such as sidewalks or multi-use paths are provided along both sides of all study area roads with the exception of Sixteen Mile Drive west of Neyagawa Boulevard.

Cycling infrastructure is provided within the study area as follows:

- Bike lanes:
  - Along both sides of Neyagawa Boulevard north of Dundas Street West, The provision of active transportation facilities within the study area includes a bike lane along both sides of Langstaff Road.
- Multi-use trail:
  - Along the south side of Dundas Street West, from the west of Neyagawa Boulevard towards the east
  - Along the west side of Neyagawa Boulevard to the north of Dundas Street West and both sides of Neyagawa Boulevard south of Dundas Street West

The pedestrian and bicycle routes are illustrated in the figure below.

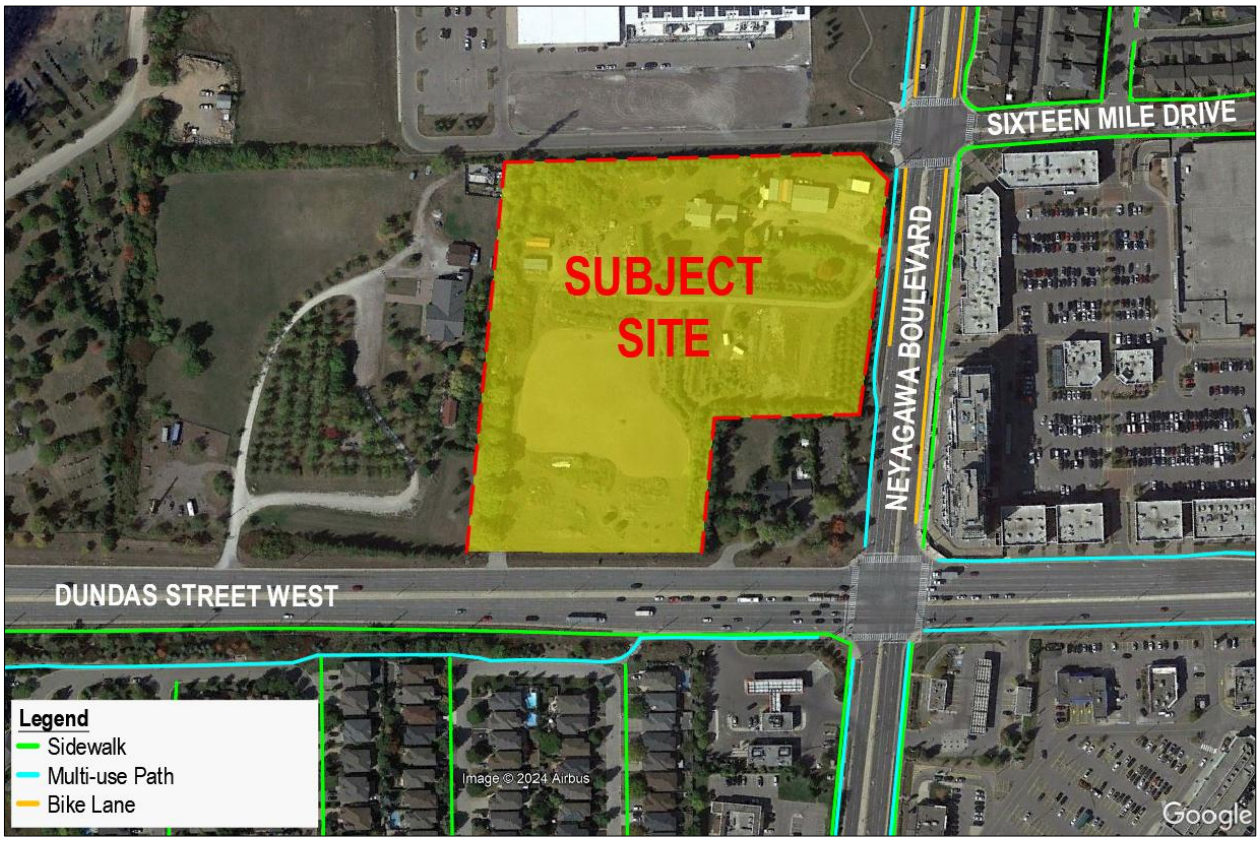


Figure 4 Existing Active Transportation Facilities

3.3 Transit Services

Oakville Transit currently offers transit service along the following routes within the study area:

Route 5/5A (**Dundas**) operates between the Oakville GO Station and the Dundas at Highway 407 Park & Ride generally along Trafalgar Road and Dundas Street West. The Route 5A deviates slightly from Route 5 by travelling north of Dundas Street on Sixteen Mile Drive/Wheat Boom Drive between Ernest Appelbe Boulevard and Neyagawa Boulevard. The combination of routes 5 and 5A operate with a general headway of 15 minutes during the peak hours, with the respective legs operating with 30-minute headways.

Transit stops are provided for the eastbound and westbound direction on Route 5 at Dundas Street West and Neyagawa Boulevard and transit stops for Route 5A provided in the southbound approach at Dundas Street West and Neyagawa Boulevard for the westbound direction and in the northbound approach at Sixteen Mile Drive and Neyagawa Boulevard for the eastbound direction.

Route 5/5A and its transit routes within the study area are shown in the figure below.



Figure 5 Existing Transit Routes and Transit Stops

3.4 Existing Traffic Data

GHD contracted Ontario Traffic Inc. to conduct updated turning movement counts at all existing study intersections in May 2024. The baseline 2024 traffic volumes for the a.m. and p.m. peak hours are summarized in **Figure 6** below with the full turning movement counts provided in **Appendix C.** Signal timings were also provided by Halton Region and included in **Appendix C.**

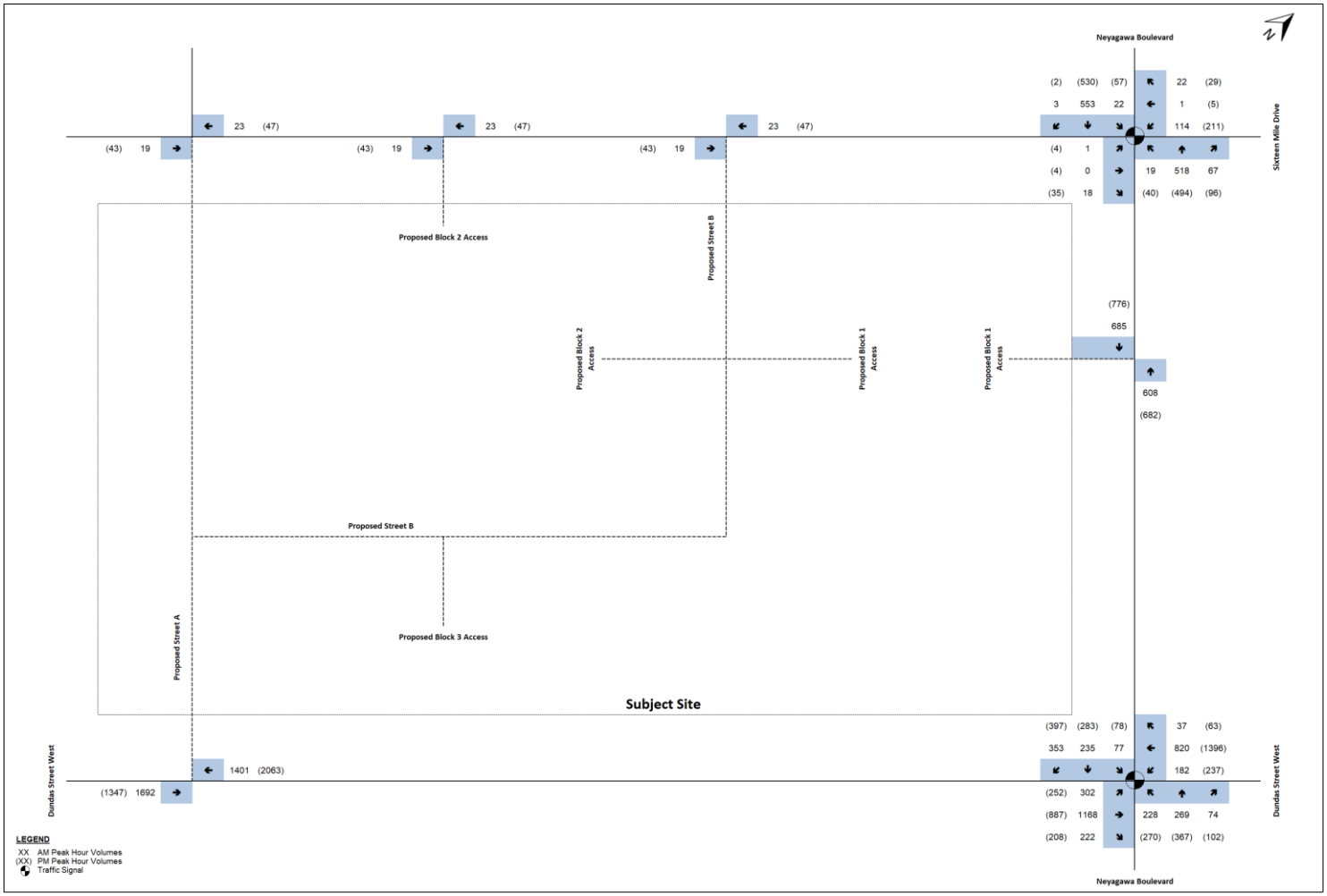


Figure 6 Baseline 2024 Traffic Volumes

4. Future Conditions

4.1 Study Horizon Year

Future horizon years of 2030, 2032, and 2035 were selected for the analysis of future traffic conditions, corresponding to the anticipated build-out year of Phase 1, Phase 2, and Phase 3, generally consistent with the Town and Region's TIS Guidelines and confirmed through the Terms of Reference.

4.2 Corridor Growth

The growth rates used to project the 2030, 2032, and 2035 traffic volumes were provided by Region staff and consisted of a 2% per annum growth rate. The growth rate was applied to all movements with the exception of the inbound and outbound movements for the west leg of the intersection of Neyagawa Boulevard and Sixteen Mile Creek as it currently operates as an access to the Sixteen Mile Sports Complex and assumed to not be subject to any growth.

4.3 Background Development Traffic

GHD reviewed the Town's development application portal to identify any developments located in proximity to the subject site that would generate additional traffic along the study area roadways and retrieve relevant documents from the respective studies.

The following developments have been identified, and approved through the Terms of Reference:

- 393 Dundas Street West
- 407 Dundas Street West
- 509 Dundas Street West
- 3009 Gladeside Avenue

The locations of the background developments are shown in **Figure 7** below.



Figure 7 Location of Background Developments

The estimated site trips generated by each background development were extracted from their respective Traffic Studies and is summarized in **Table 1** below with detailed excerpts from the background studies attached in **Appendix D**. All background developments are assumed to be occupied by the 2030 horizon year.

The total site trips for all the background developments are summarized in **Table 1**.

Table 1 Background Development Traffic

Background Development	Units/GFA	Peak Hour Trips					
		Weekday AM			Weekday PM		
		In	Out	Total	In	Out	Total
393 Dundas Street West	318 high-rise dwelling units, 15 townhouse dwelling units, and 2,494 ft^2 commercial GFA	24	74	98	84	62	146
407 Dundas Street West	283 high-rise dwelling units, 36 stacked townhouse dwelling units, and 3,757 ft^2 commercial GFA	28	80	108	91	66	157
509 Dundas Street West	153 mid-rise dwelling units	11	56	67	54	26	80
3009 Gladeside Avenue	318 mid-rise dwelling units and 383 m^2	31	82	113	79	57	136
Total		**94**	**292**	**386**	**308**	**211**	**519**

The total background development traffic from the background developments is summarized in **Figure 8** with the relevant excerpts provided in **Appendix D**.

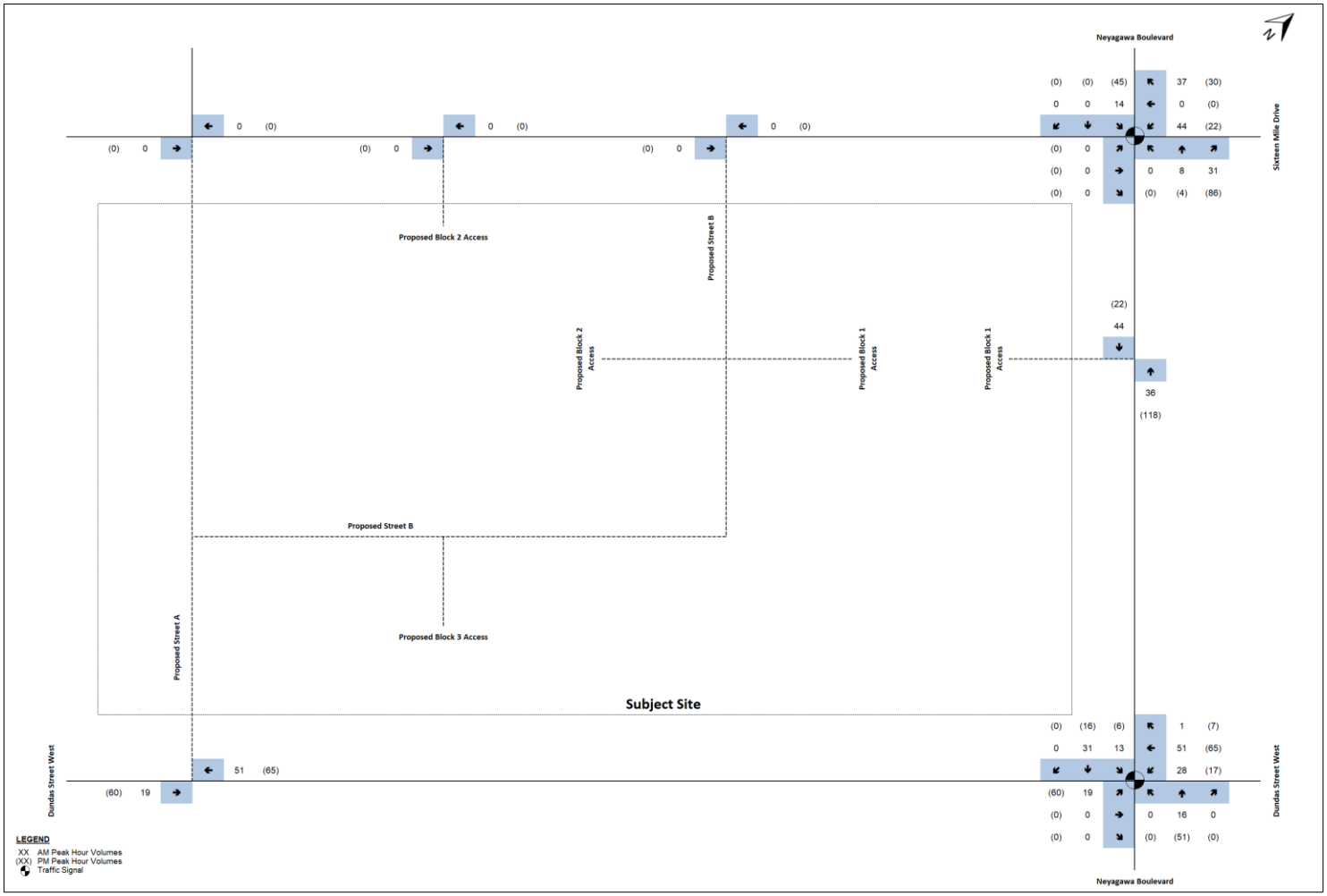


Figure 8 Total Background Development Traffic

4.4 Roadway Improvements

As identified by Region staff, the currently constructed 6-lane cross-section of Dundas Street West will include an HOV lane in both direction in the future. The timeline for the implementation of the HOV lane is currently unknown, however Region staff requested GHD to include the HOV lane under a 2029 horizon year. As a result, GHD will include an HOV lane under all three future horizon years.

As directed by Region staff, the capacity analysis will include a lane utilization factor of 0.80 for through movements along Dundas Street to account for the assumption that 20% of the lane capacity is assigned to the HOV lane.

4.5 Future Background Traffic Volumes

The background traffic volumes for the 2030, 2032, and 2035 horizon year were derived by applying the respective growth rates to the study area roads and the total background development traffic from **Figure 8**. The resulting 2030, 2032, and 2035 future background traffic volumes are summarized in **Figure 9**, **Figure 10**, and **Figure 11**, respectively.

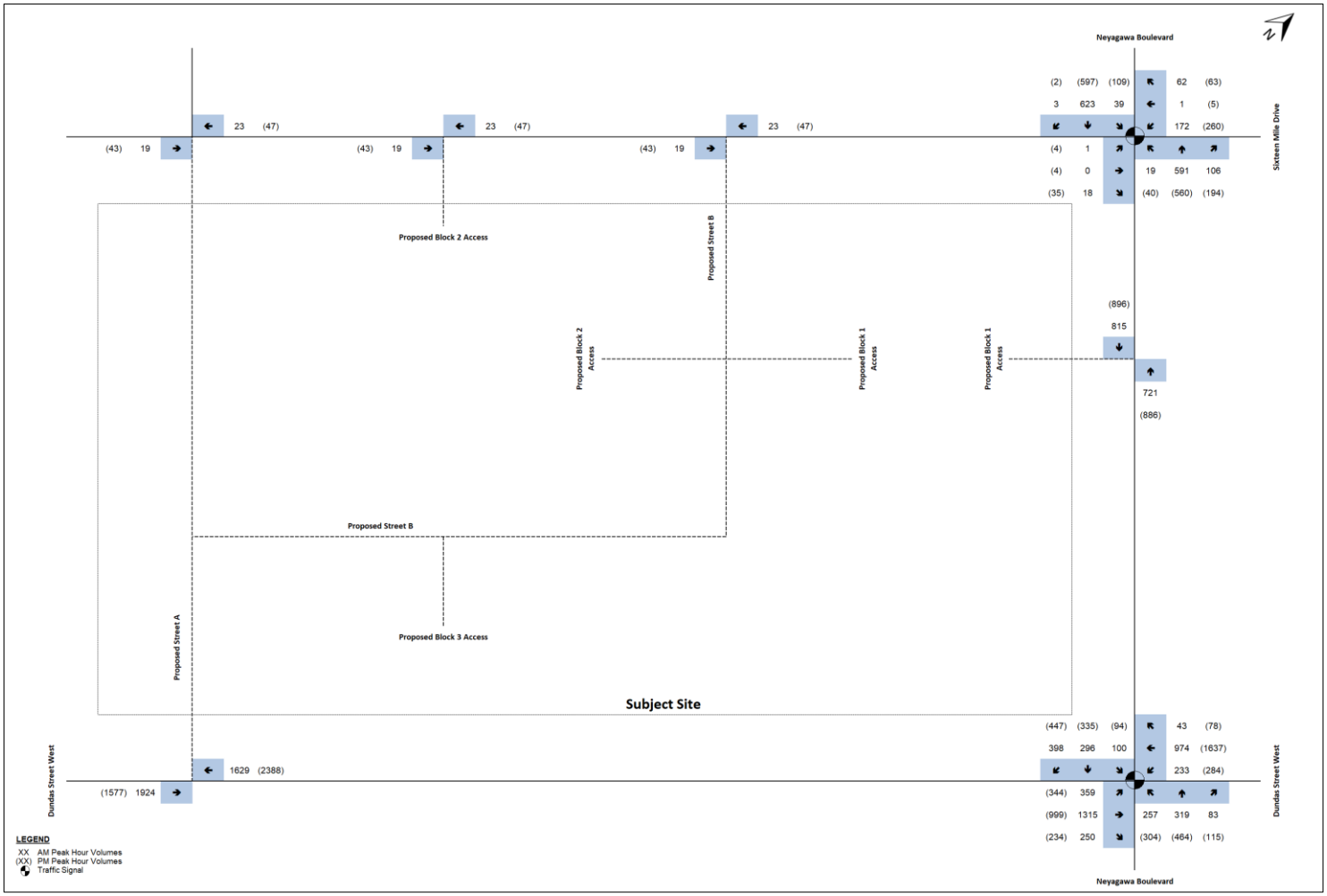


Figure 9 2030 Future Background Traffic Volumes

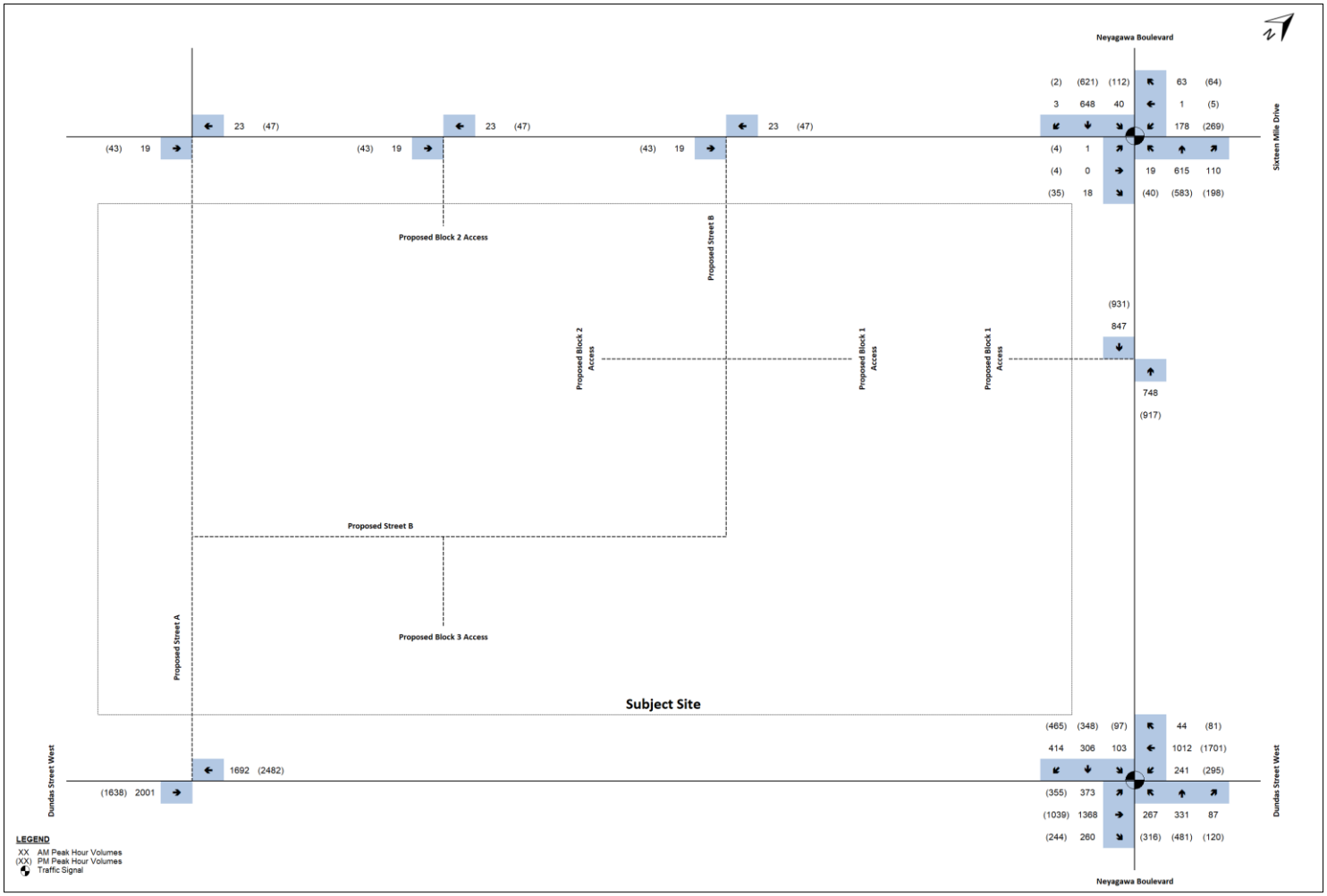


Figure 10 2032 Future Background Traffic Volumes

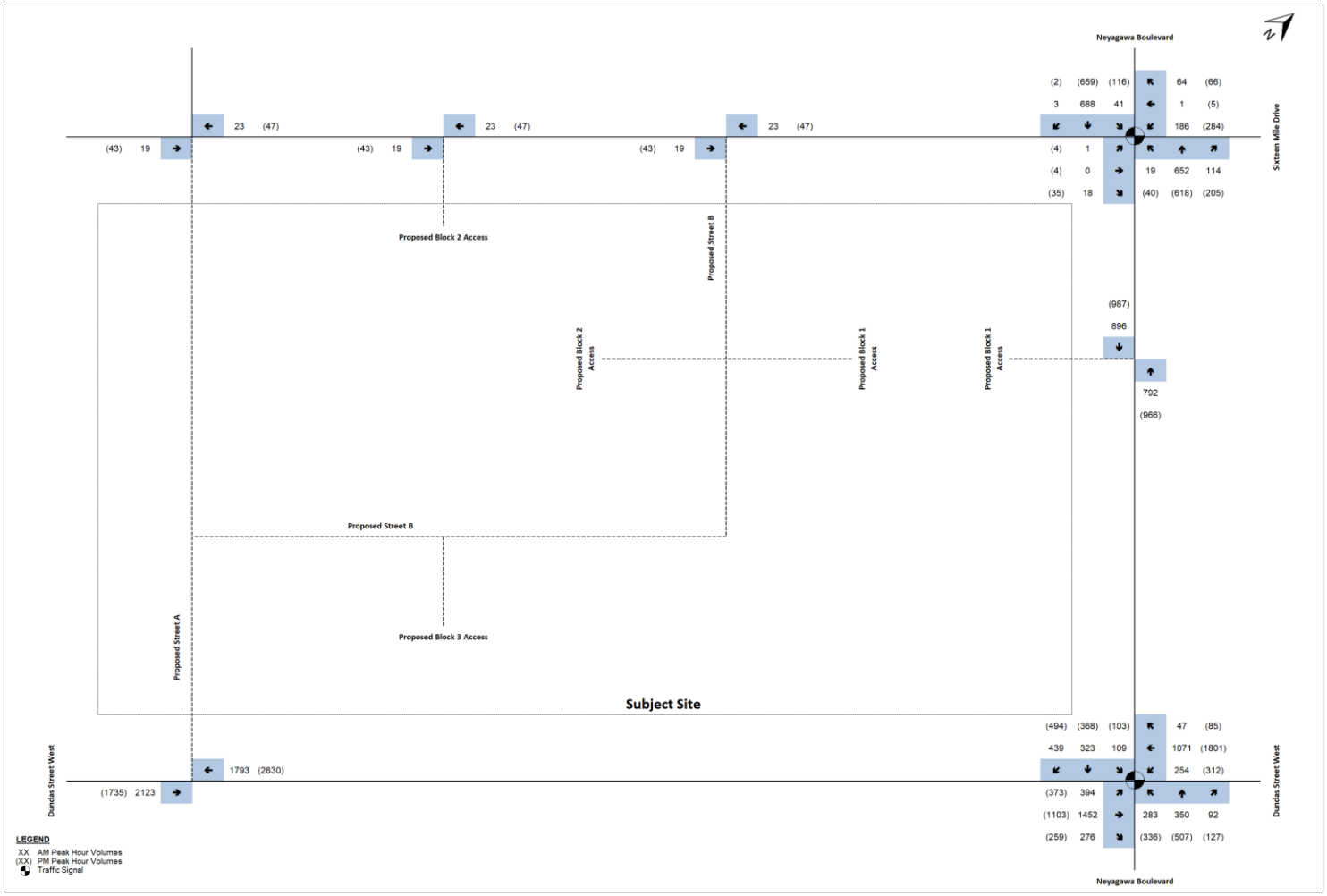


Figure 11 2035 Future Background Traffic Volumes

5. Site Generated Traffic

5.1 Modal Split

Region staff have identified the transit mode splits from the Halon Region's 2011 Transportation Master Plan, which used transit mode splits of 10% for 2021, 15% for 2026 and 20% for 2031 and requested that transit mode splits be adjusted from the 2011 TMP assumptions to reasonable percentages based on current year and planned horizon years proposed mode splits, established on existing facilities and service in the area to date, and planned/proposed facilities and service.

GHD reviewed the 2016 Transportation Tomorrow Survey (TTS) data to establish the existing mode splits for the subject site and surrounding zones. The TTS data was compiled separately for inbound trips towards home and outbound trips from home during both peak hours. The ITE Trip Generation rates also include a 5% non-auto mode split built into its trip generation rates that will be factored into the non-auto driver mode split reductions. The 2016 data for the subject site and the surrounding area is summarized in the table below.

Table 2 Existing Mode Split

Mode	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
Auto Driver	84%	61%	73%	62%
Auto Passenger	2%	16%	11%	30%
Transit	0%	11%	13%	5%
Active Transportation	13%	12%	3%	3%
Non-Auto Split	13%	23%	16%	8%
Non-Auto Split with 5% reduction	**0%***	**18%**	**11%**	**3%**

*Due to the low sample size of the 2016 TTS data, GHD did not apply a modal split reduction

Based on the 2016 TTS data, the subject site is expected to have non-auto mode splits of 0% for inbound trips and 23% for outbound trips during the a.m. peak hour and a mode split of 16% for inbound trips and 8% for outbound trips during the p.m. peak hour.

5.2 Site Trip Generation

The proposed development consists of a total 2,278 dwelling units and 1,551 m^2 of retail GFA within 7 high-rise residential buildings located within three blocks. The breakdown between the three blocks is provided in **Section 2.2**, however the phases of construction are as follows:

- Phase 1
  - Building 1: 395 dwelling units, 1,079 m^2 of retail GFA
  - Building 2: 258 dwelling units
- Phase 2
  - Building 3: 266 dwelling units, 472 m^2 of retail GFA
  - Building 4: 341 dwelling units
- Phase 3
  - Building 5: 389 dwelling units
  - Building 6: 216 dwelling units
  - Building 7: 413 dwelling units

Site traffic generated by the proposed development for the weekday a.m. and p.m. peak hours was estimated by applying the trip rates for Land Use Code 222 Multifamily Housing (High-Rise) - Not Close to Rail Transit and LUC 922 Strip Retail Plaza in the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE).

GHD used the methodology from the ITE Trip Generation Handbook 3rd for selecting the average rate or equation in Trip Generation Manual data (Figure 4.2 of the handbook) to determine if the average rate or fitted curve equation is to be used to estimate the trip generation for the subject site. When using the methodology based on the trip generation being completed for the three block individually, the fitted curve equation was selected to estimate the trip generation for the subject site.

Table 3 summarizes the estimated trip generation for the subject site. Individual trips for passenger vehicles and trucks were calculated for the site.

Table 3 Total Site Trip Generation

Land Use	Phase	Unit Count/GFA	Parameters	Peak Hour Trip Generation					
				Weekday AM			Weekday PM		
				In	Out	Total	In	Out	Total
Multi-Family Housing High-rise – Not Close to Transit (222)	1	645 units	Trip Ratio	26%	74%	100%	62%	38%	100%
			Gross Trips	42	119	161	118	73	191
			Non-Auto Reduction	0	-21	-21	-13	-2	-15
			Primary Trips	**42**	**98**	**140**	**105**	**71**	**176**
	2	606 units	Trip Ratio	26%	74%	100%	62%	38%	100%
			Gross Trips	40	112	152	112	69	181
			Non-Auto Reduction	0	-20	-20	-12	-2	-14
			Primary Trips	**40**	**92**	**132**	**100**	**67**	**167**
	3	927 units	Trip Ratio	26%	74%	100%	62%	38%	100%
			Gross Trips	58	165	223	164	100	264
			Non-Auto Reduction	0	-30	-30	-18	-3	-21
			Primary Trips	**58**	**135**	**193**	**146**	**97**	**243**
Strip Retail Plaza (<40k) (822)	1	11,614 ft^2	Trip Ratio	60%	40%	100%	50%	50%	100%
			Gross Trips	19	12	3	42	42	84
			Internal Capture	-10	-6	-16	-21	-21	-42
			Primary Trips	9	6	15	21	21	42
	2	5,081ft^2	Trip Ratio	60%	40%	100%	50%	50%	100%
			Gross Trips	11	7	18	24	24	48
			Internal Capture	-6	-4	-10	-12	-12	-24
			Primary Trips	5	3	8	12	12	24
Total New Primary Trips				**154**	**334**	**488**	**384**	**268**	**652**
Total Site Trips From December 2024 Submission				**159**	**349**	**508**	**401**	**276**	**677**
Net Difference				**-5**	**-15**	**-20**	**-17**	**-8**	**-25**

The proposed development is expected to generate a total of 488 two-way vehicle trips during the a.m. peak hour consisting of 154 inbound and 334 outbound trips. During the p.m. peak hour, it is expected to generate 652 new two-way vehicle trips consisting of 384 inbound and 268 outbound trips.

5.3 Site Traffic Distribution and Assignment

The site generated traffic for the subject site was distributed based on the existing travel patterns and a review of the 2016 Transportation Tomorrow Survey (TTS) data.

The directional distribution is provided in **Table 4** with the site generated traffic assignment to the study area road network for the weekday a.m. and p.m. peak hours provided in **Figure 12** for Block 1, **Figure 13** for Block 2 and **Figure 14** for Block 3. The total site trips for the proposed development is summarized in **Figure 15**.

Table 4 Site Traffic Distribution

Peak Period	Direction	North (Neyagawa)	South (Neyagawa)	East (Dundas)	West (Dundas)
AM	Inbound	15%	15%	25%	45%
	Outbound	25%	25%	25%	25%
PM	Inbound	20%	20%	45%	15%
	Outbound	15%	15%	25%	45%

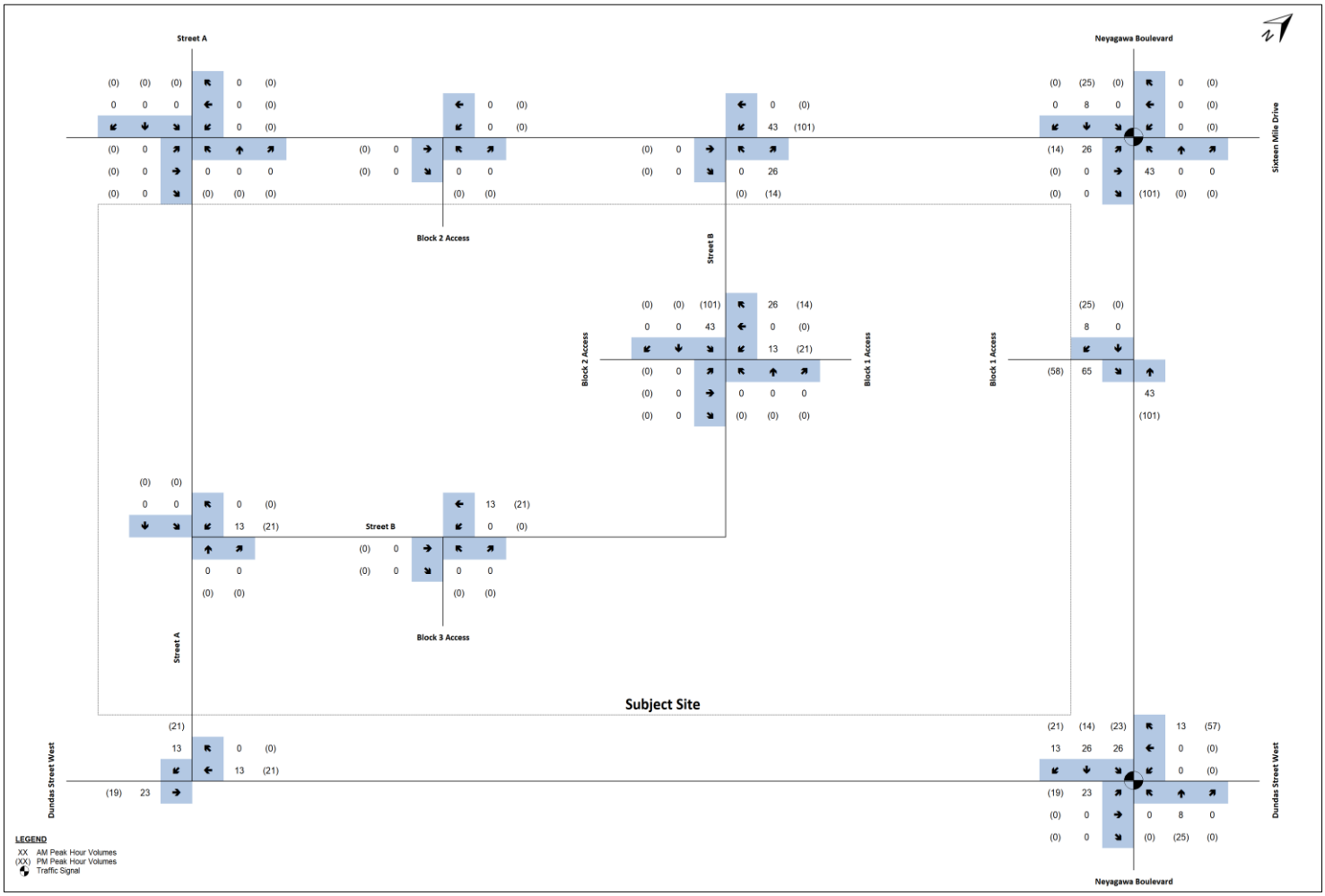


Figure 12 Phase 1 Site Trips

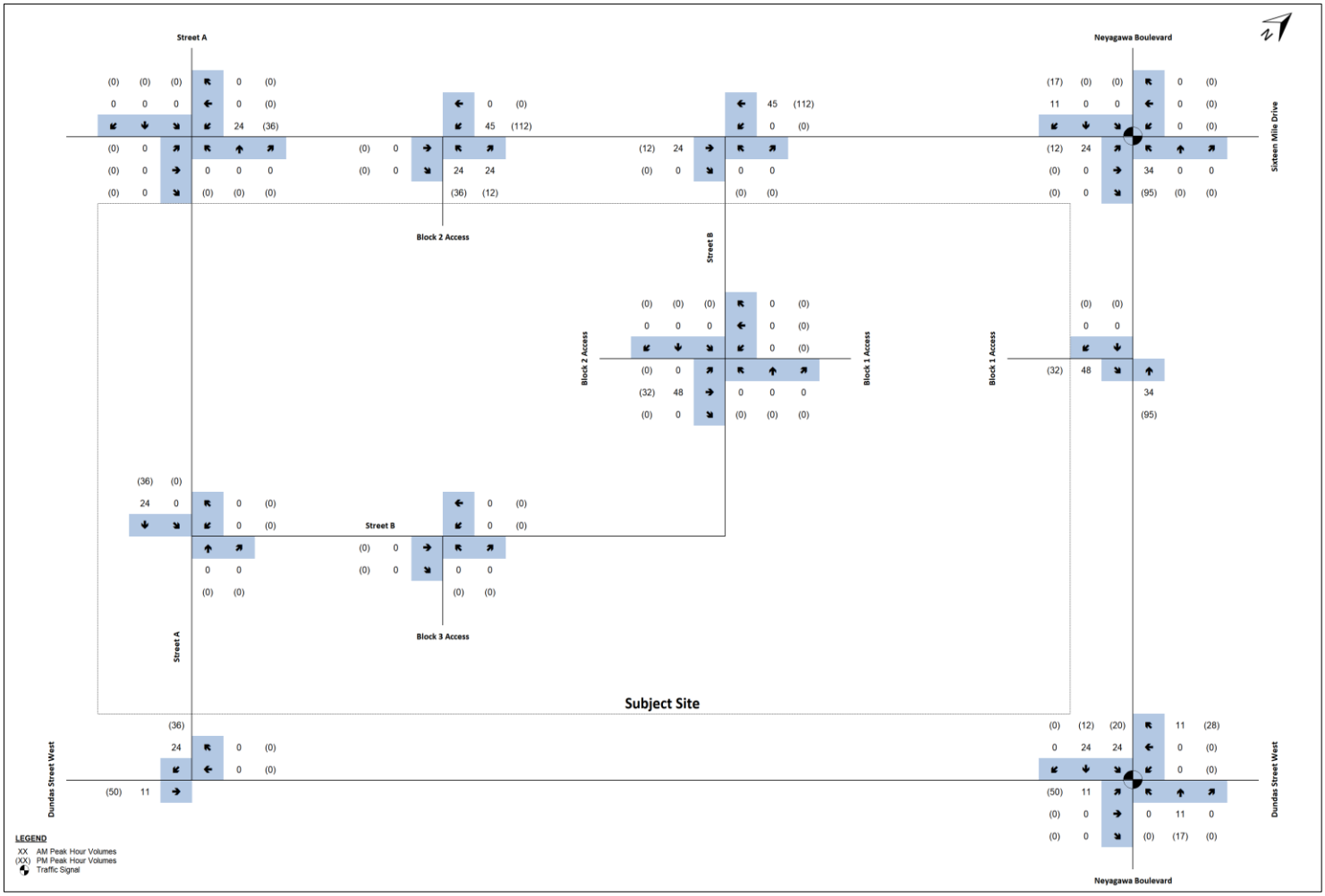


Figure 13 Phase 2 Site Trips

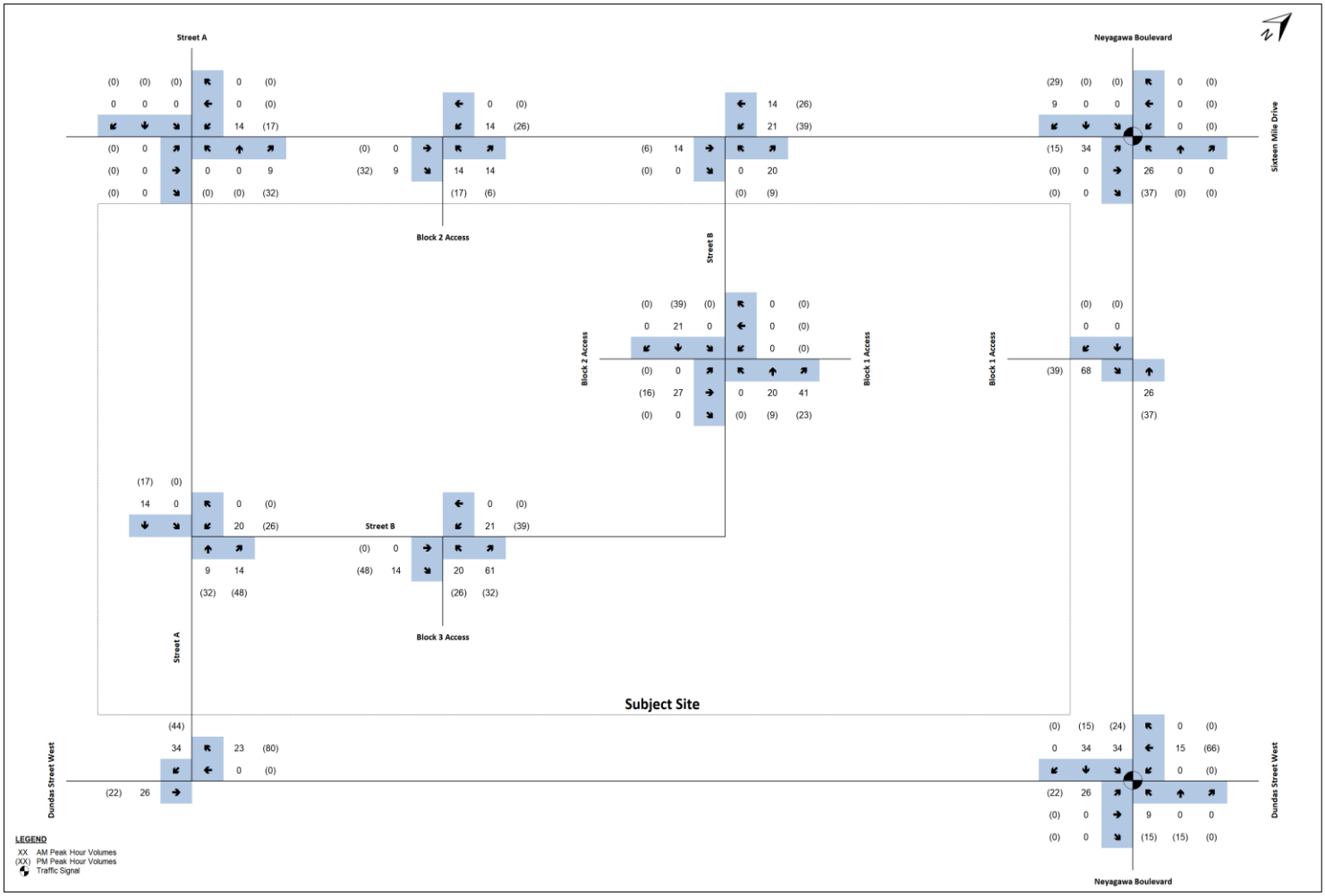


Figure 14 Phase 3 Site Trips

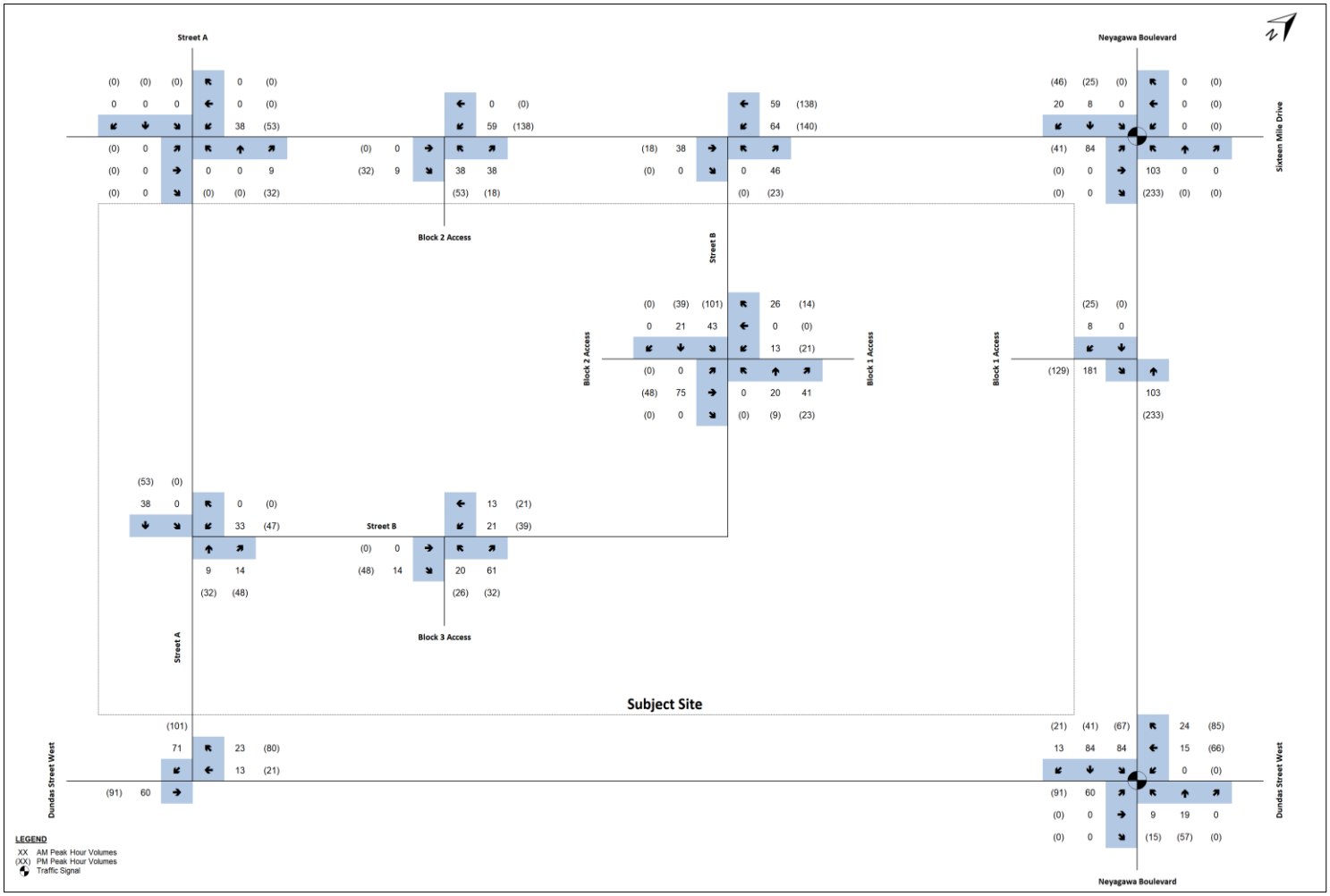


Figure 15 Total Site Trips

5.4 Traffic Redistribution

The provision of a new north/south road (Street A) between Dundas Street West and Sixteen Mile Drive provides a new connection for drivers that use the Sixteen Mile Sports Complex to access Dundas Street West. With its intersection with Dundas Street West restricted to right-in/right-out, Street A could potentially be used by drivers arriving from the east and/or departing towards the west on Dundas Street that currently use Neyagawa Boulevard between Dundas Street and Sixteen Mile Drive.

Based on existing travel patterns at the two existing intersections of Dundas Street West at Neyagawa Boulevard and Sixteen Mile Drive at Neyagawa Boulevard, GHD redistributed some existing traffic onto the proposed Street A. The projected redistribution of traffic is summarized in **Figure 16**.

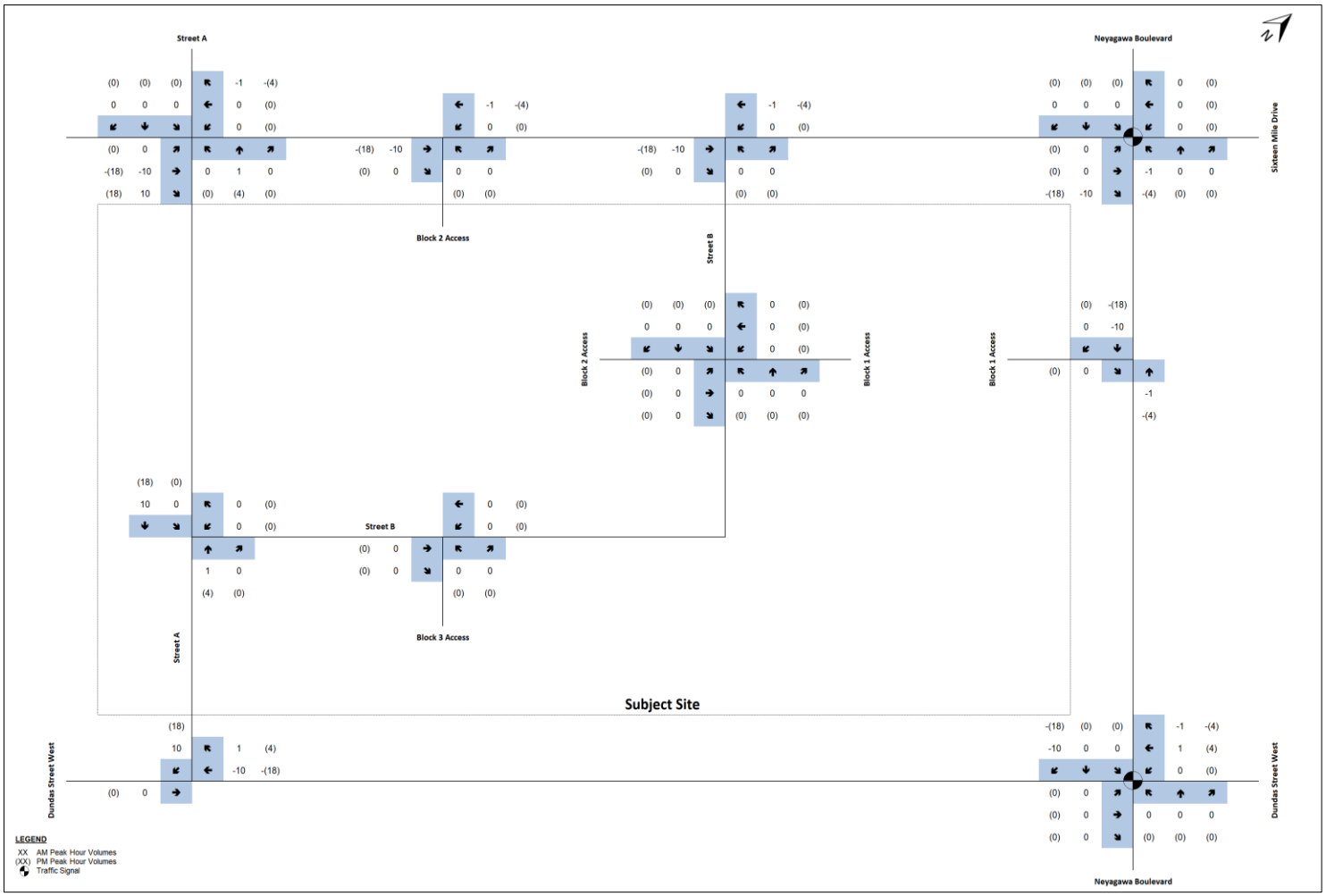


Figure 16 Street A Projected Traffic Redistribution

6. Future Total Traffic

The future total traffic conditions in the weekday a.m. and p.m. peak hours for the 2030, 2032, and 2035 planning horizon was derived by combining the projected future background traffic with the corresponding estimated site generated traffic in addition to the traffic redistribution. The resulting traffic volumes are presented in **Figure 17** for the 2030 horizon year, **Figure 18** for the 2032 horizon year, and **Figure 19** for the 2035 horizon year.

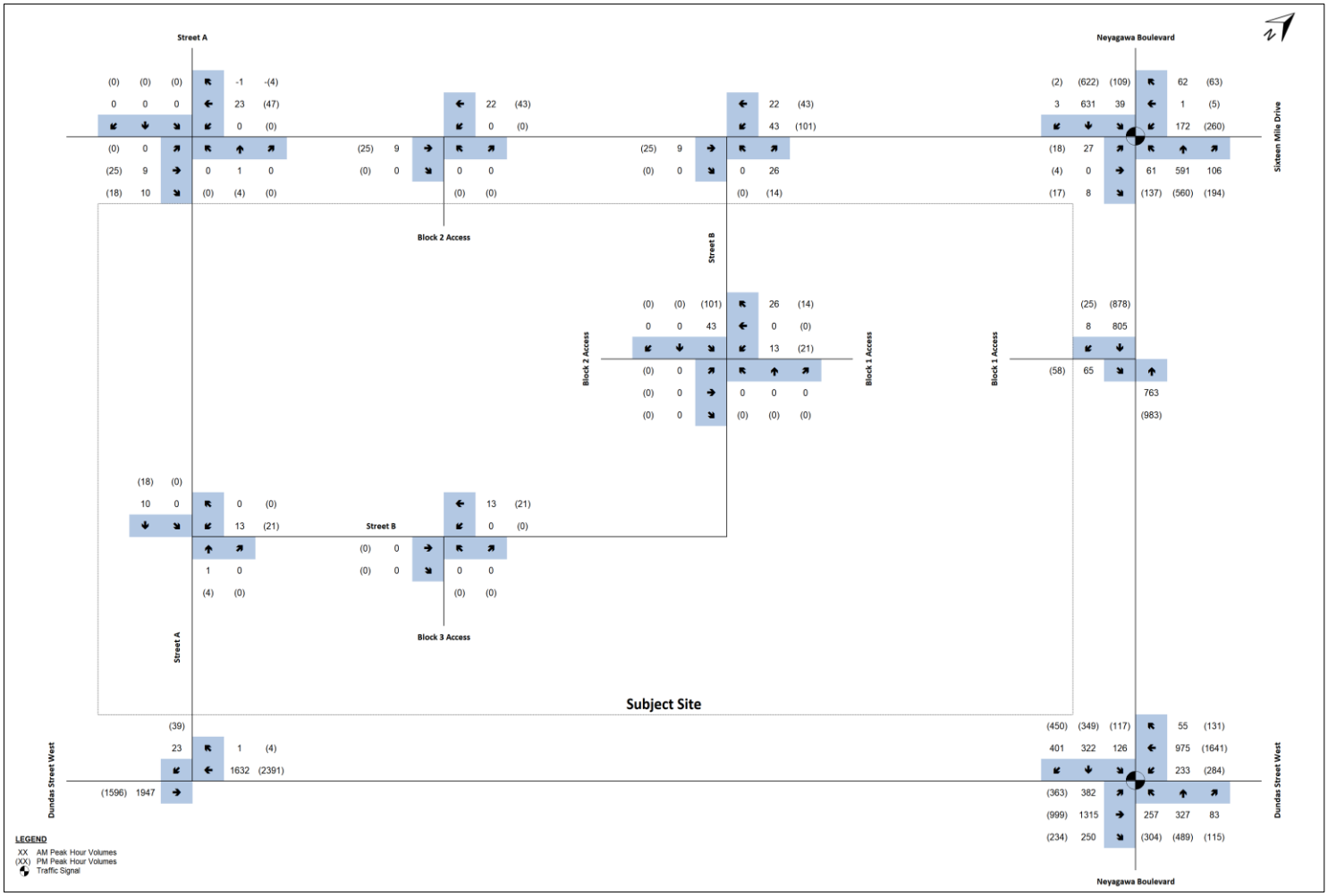


Figure 17 2030 Future Total Traffic Volumes

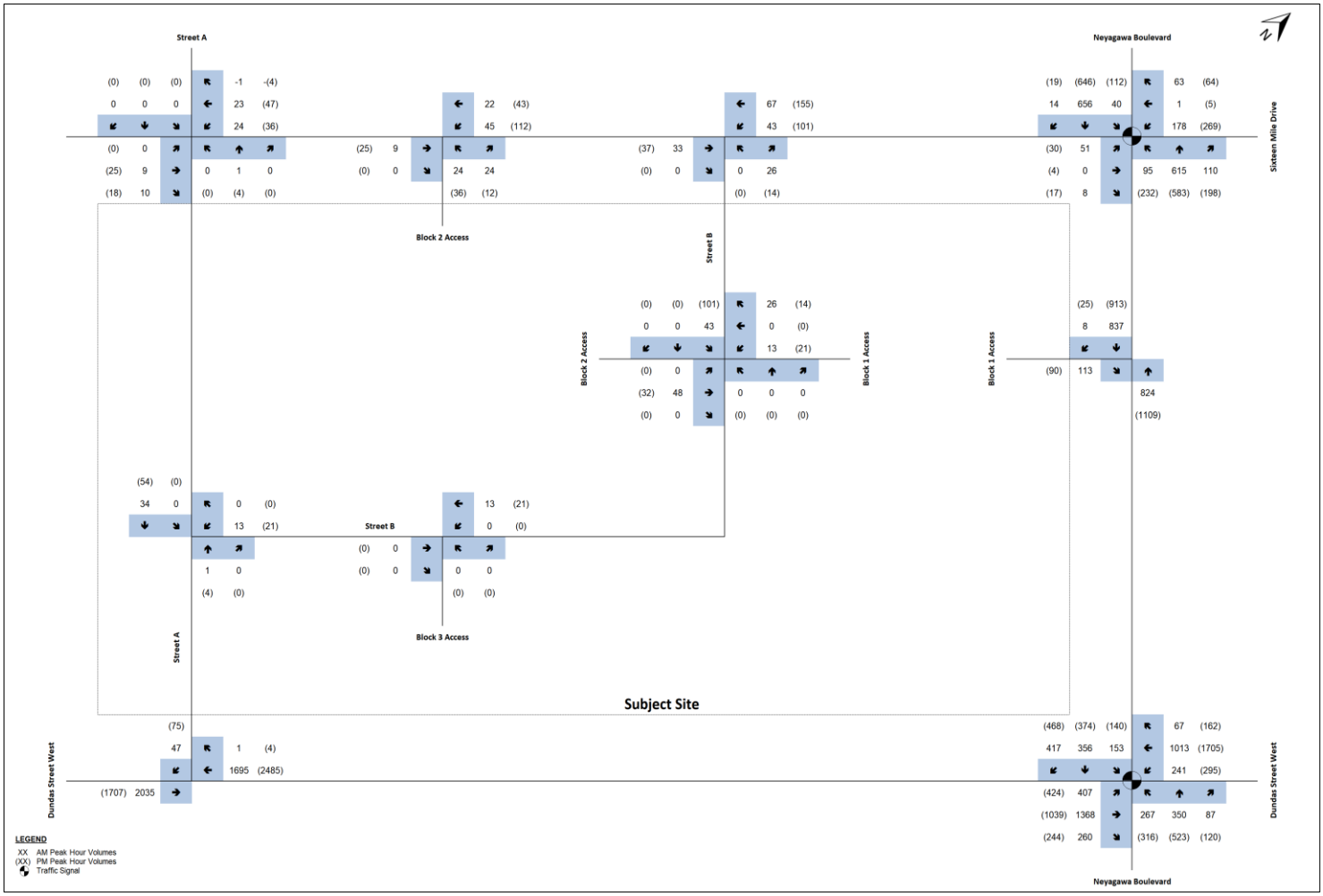


Figure 18 2032 Future Total Traffic Volumes

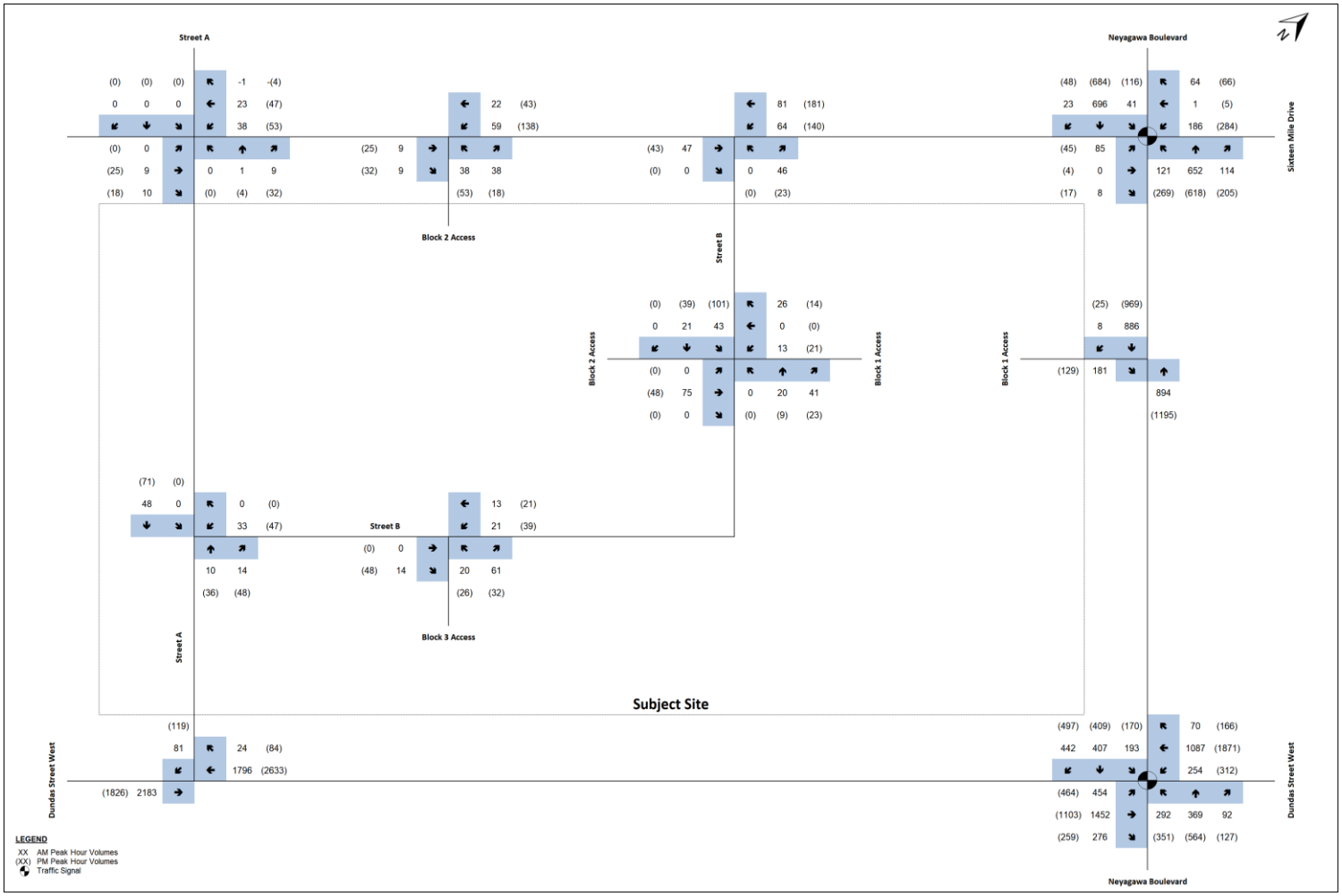


Figure 19 2035 Future Total Traffic Volumes

7. Capacity Analysis

The capacity analysis identifies how well the intersections and driveways are operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 procedure within the Synchro Version 11 Software package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. Both pedestrian crossing volumes and heavy vehicle proportions are included in the analyses. The peak hour factors from the counts were used to analyze existing traffic conditions.

Existing peak hour factors were also used for future traffic conditions.

The analysis includes identification and required modifications and improvements (if any) at intersections where the addition of background growth or background growth plus site-generated traffic volumes causes the following:

'Critical' intersections and movements for a signalized intersection include:

- V/C ratios for overall intersections operations increase to 0.85 or above;
- V/C ratios for individual movements increase to 0.95 or above; or
- 95th percentile queue length for individual movements that are projected to, or exceed, the storage length.

'Critical' intersections and movements for an unsignalized intersection include:

- Level of Services (LOS), based on average delay per vehicle, on individual movements exceeds LOS "E",
- Queue length for individual movements exceed the available queue storage.

The following tables summarize the HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2024), future background (2030, 2032, and 2035) and future total (2030, 2032, and 2035) traffic conditions. The detailed calculation sheets are provided in **Appendix F**.

7.1 Dundas Street West and Neyagawa Boulevard

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 5 Capacity analysis of Dundas Street West and Neyagawa Boulevard

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2024	Overall: 0.72 (C) 27 EBL = 0.68 (B) 18 EBT = 0.66 (C) 25 EBR = 0.16 (B) 20 WBL = 0.61 (C) 21 WBT = 0.57 (C) 27 WBR = 0.03 (C) 22 NBL = 0.65 (C) 30 NBTR = 0.46 (C) 32 SBL = 0.28 (C) 28 SBT = 0.39 (C) 33 SBR = 0.51 (D) 35	 EBL = 60 m EBT = 95 m EBR = 15 m WBL = 35 m WBT = 70 m WBR = 0 m NBL = 65 m NBTR = 50 m SBL = 25 m SBT = 40 m SBR = 50 m	Overall: **0.86** (C) 34 EBL = 0.93 (E) 63 EBT = 0.49 (C) 26 EBR = 0.14 (C) 23 WBL = 0.67 (C) 22 WBT = 0.78 (C) 33 WBR = 0.04 (C) 22 NBL = 0.68 (C) 32 NBTR = 0.51 (C) 34 SBL = 0.3 (C) 33 SBT = 0.41 (D) 38 SBR = 0.69 (D) 46	 EBL = 110 m EBT = 80 m EBR = 20 m WBL = 55 m WBT = 140 m WBR = 0 m NBL = 70 m NBTR = 65 m SBL = 25 m SBT = 45 m SBR = 75 m
Future Background 2030	Overall: **0.9** (C) 35 EBL = 0.86 (D) 40 EBT = 0.76 (C) 29 EBR = 0.22 (C) 21 WBL = 0.77 (C) 33 WBT = 0.69 (C) 31 WBR = 0.03 (C) 23 NBL = 0.91 (E) 66 NBTR = 0.62 (D) 41 SBL = 0.41 (C) 32 SBT = 0.47 (D) 39 SBR = 0.59 (D) 42	 EBL = 130 m EBT = 140 m EBR = 30 m WBL = 85 m WBT = 105 m WBR = 0 m NBL = 75 m NBTR = 60 m SBL = 30 m SBT = 45 m SBR = 60 m	Overall: **1.03** (D) 55 EBL = **0.95** (E) 70 EBT = 0.59 (C) 29 EBR = 0.16 (C) 24 WBL = 0.79 (C) 30 WBT = **1.05** (E) 75 WBR = 0.05 (C) 25 NBL = **1.06** (F) 110 NBTR = 0.75 (D) 48 SBL = 0.49 (D) 36 SBT = 0.44 (D) 40 SBR = 0.66 (D) 47	 EBL = 145 m EBT = 115 m EBR = 20 m WBL = 90 m WBT = 255 m WBR = 10 m NBL = 105 m NBTR = 90 m SBL = 30 m SBT = 50 m SBR = 80 m
Future Total 2030	Overall: **0.95** (D) 36 EBL = 0.92 (D) 51 EBT = 0.77 (C) 29 EBR = 0.22 (C) 21 WBL = 0.77 (C) 34 WBT = 0.69 (C) 31 WBR = 0.04 (C) 23 NBL = 0.93 (E) 73 NBTR = 0.62 (D) 41 SBL = 0.52 (C) 34 SBT = 0.5 (D) 39 SBR = 0.6 (D) 43	 EBL = 145 m EBT = 145 m EBR = 30 m WBL = 85 m WBT = 110 m WBR = 0 m NBL = 80 m NBTR = 60 m SBL = 40 m SBT = 50 m SBR = 65 m	Overall: **1.05** (E) 57 EBL = **1.01** (F) 88 EBT = 0.6 (C) 30 EBR = 0.16 (C) 24 WBL = 0.79 (C) 31 WBT = **1.06** (E) 80 WBR = 0.14 (C) 26 NBL = **1.06** (F) 111 NBTR = 0.77 (D) 48 SBL = 0.63 (D) 40 SBT = 0.44 (D) 40 SBR = 0.66 (D) 47	 EBL = 160 m EBT = 125 m EBR = 25 m WBL = 110 m WBT = 280 m WBR = 10 m NBL = 110 m NBTR = 90 m SBL = 30 m SBT = 55 m SBR = 80 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Background 2032	Overall: **0.96** (D) 38 EBL = 0.92 (D) 54 EBT = 0.78 (C) 30 EBR = 0.24 (C) 21 WBL = 0.82 (D) 42 WBT = 0.7 (C) 32 WBR = 0.03 (C) 23 NBL = **0.95** (E) 78 NBTR = 0.62 (D) 42 SBL = 0.44 (C) 33 SBT = 0.47 (D) 39 SBR = 0.64 (D) 45	 EBL = 145 m EBT = 155 m EBR = 35 m WBL = 95 m WBT = 115 m WBR = 0 m NBL = 80 m NBTR = 60 m SBL = 30 m SBT = 50 m SBR = 70 m	Overall: **1.07** (E) 63 EBL = **0.99** (F) 83 EBT = 0.65 (C) 32 EBR = 0.18 (C) 26 WBL = 0.81 (D) 37 WBT = **1.1** (F) 94 WBR = 0.05 (C) 25 NBL = **1.09** (F) 121 NBTR = 0.75 (D) 48 SBL = 0.52 (D) 36 SBT = 0.44 (D) 40 SBR = 0.67 (D) 47	 EBL = 160 m EBT = 125 m EBR = 25 m WBL = 110 m WBT = 280 m WBR = 10 m NBL = 110 m NBTR = 90 m SBL = 30 m SBT = 55 m SBR = 80 m
Future Total 2032	Overall: **1.05** (D) 42 EBL = **1.01** (E) 78 EBT = 0.79 (C) 31 EBR = 0.24 (C) 22 WBL = 0.83 (D) 43 WBT = 0.7 (C) 32 WBR = 0.05 (C) 23 NBL = **1.02** (F) 98 NBTR = 0.64 (D) 42 SBL = 0.66 (D) 40 SBT = 0.53 (D) 40 SBR = 0.65 (D) 45	 EBL = 170 m EBT = 160 m EBR = 35 m WBL = 95 m WBT = 115 m WBR = 5 m NBL = 90 m NBTR = 65 m SBL = 45 m SBT = 55 m SBR = 70 m	Overall: **1.19** (E) 71 EBL = **1.2** (F) 153 EBT = 0.66 (C) 33 EBR = 0.18 (C) 26 WBL = 0.82 (D) 40 WBT = **1.12** (F) 102 WBR = 0.19 (C) 28 NBL = **1.1** (F) 125 NBTR = 0.77 (D) 48 SBL = 0.78 (D) 53 SBT = 0.45 (D) 40 SBR = 0.66 (D) 46	 EBL = 205 m EBT = 125 m EBR = 25 m WBL = 110 m WBT = 280 m WBR = 35 m NBL = 115 m NBTR = 100 m SBL = 45 m SBT = 60 m SBR = 85 m
Future Background 2035	Overall: **1.06** (D) 44 EBL = **1.04** (F) 89 EBT = 0.82 (C) 33 EBR = 0.26 (C) 22 WBL = 0.91 (E) 62 WBT = 0.72 (C) 33 WBR = 0.03 (C) 23 NBL = **1.01** (F) 97 NBTR = 0.62 (D) 43 SBL = 0.47 (C) 34 SBT = 0.46 (D) 40 SBR = 0.7 (D) 49	 EBL = 175 m EBT = 180 m EBR = 40 m WBL = 115 m WBT = 130 m WBR = 0 m NBL = 90 m NBTR = 65 m SBL = 35 m SBT = 50 m SBR = 80 m	Overall: **1.15** (E) 79 EBL = **1.07** (F) 106 EBT = 0.69 (C) 34 EBR = 0.21 (C) 26 WBL = 0.94 (E) 66 WBT = **1.19** (F) 134 WBR = 0.06 (C) 27 NBL = **1.14** (F) 136 NBTR = 0.74 (D) 46 SBL = 0.54 (D) 36 SBT = 0.43 (D) 40 SBR = 0.75 (D) 51	 EBL = 180 m EBT = 140 m EBR = 30 m WBL = 140 m WBT = 315 m WBR = 15 m NBL = 120 m NBTR = 95 m SBL = 30 m SBT = 55 m SBR = 100 m
Future Total 2035	Overall: **1.24** (D) 55 EBL = **1.23** (F) 159 EBT = 0.83 (C) 34 EBR = 0.26 (C) 23 WBL = 0.93 (E) 66 WBT = 0.73 (C) 34 WBR = 0.05 (C) 24 NBL = **1.17** (F) 150 NBTR = 0.62 (D) 42 SBL = 0.84 (E) 59 SBT = 0.56 (D) 41 SBR = 0.71 (D) 48	 EBL = 220 m EBT = 185 m EBR = 40 m WBL = 115 m WBT = 135 m WBR = 5 m NBL = 110 m NBTR = 70 m SBL = 55 m SBT = 65 m SBR = 85 m	Overall: **1.33** (F) 100 EBL = **1.35** (F) 214 EBT = 0.7 (D) 35 EBR = 0.21 (C) 27 WBL = 0.96 (E) 73 WBT = **1.26** (F) 163 WBR = 0.21 (C) 29 NBL = **1.22** (F) 169 NBTR = 0.78 (D) 47 SBL = 0.95 (F) 91 SBT = 0.46 (D) 40 SBR = 0.73 (D) 49	 EBL = 240 m EBT = 140 m EBR = 30 m WBL = 140 m WBT = 335 m WBR = 35 m NBL = 140 m NBTR = 105 m SBL = 65 m SBT = 65 m SBR = 100 m

Under existing traffic conditions, the signalized intersection of Dundas Street West and Neyagawa Boulevard is operating at satisfactory levels with an overall v/c ratio of 0.72 LOS C during the a.m. peak hour and 0.86 LOS C

during the p.m. peak hour. The intersection does not currently operate with a critical movement, however the overall intersection is at a critical level with its overall v/c ratio of 0.86 LOS C during the p.m. peak hour.

With the addition of corridor growth, background development traffic, a lane utilization factor of 0.8 for the HOV lane on Dundas Street West and signal improvements to mitigate delays for the 2030 future background traffic scenario, the overall reported v/c of the intersection is expected to increase to 0.90 LOS C during the a.m. peak hour and 1.03 LOS D during the p.m. peak hour. The intersection continues to operate without any critical movements during the a.m. peak hour, however the overall intersection continues to operate at a critical level during both peak hours in addition to the eastbound and northbound left-turn and westbound through movements during the p.m. peak hour.

Under the 2030 future total traffic scenario, with the addition of site generated traffic from the first phase of construction, the intersection's overall v/c is reported to increase to 0.95 LOS C during the a.m. peak hour and 1.05 LOS E during the p.m. peak hour. The overall intersection continues to operate at a critical level during both peak hours with no additional critical movements as reported under the 2030 future background condition.

With the continued addition of corridor growth, as well as the same background development traffic, HOV lane on Dundas Street West and signal improvements to mitigate delays for the 2032 future background traffic scenario, the overall reported v/c of the intersection is expected to increase to 0.96 LOS D during the a.m. peak hour and 1.07 LOS E during the p.m. peak hour. The overall intersection continues to operate at a critical level during both peak hours in addition to the northbound left-turn movement during both peak hours and the eastbound left-turn and westbound through movements during the p.m. peak hour only.

With the addition of site generated traffic from the first two phases of construction, the intersection's overall v/c is reported to increase to 1.05 LOS D during the a.m. peak hour and 1.19 LOS E during the p.m. peak hour. The intersection continues to operate with the same critical movements reported under the 2032 future background condition with no additional critical movements as a result of the proposed development.

With further corridor growth, as well as the same background development traffic, HOV lane on Dundas Street West and signal improvements to mitigate delays for the 2035 future background traffic scenario, the overall reported v/c of the intersection is expected to increase to 1.06 LOS D during the a.m. peak hour and 1.15 LOS E during the p.m. peak hour. Similar to the 2032 horizon year, the intersection reports multiple critical movements that include the eastbound and northbound left-turn movements during both peak hours and westbound through during the p.m. peak hour.

With the addition of site generated traffic from the full build-out of the site, the intersection's overall v/c is reported to increase to 1.24 LOS E during the a.m. peak hour and 1.33 LOS F during the p.m. peak hour. The intersection is reported to continue to operate with the same critical movements identified under the 2035 future background condition in addition to the westbound left-turn movement during the p.m. peak hour only.

The intersection operates at a critical level during the p.m. peak hour as a result of many factors, including a large volume of eastbound left-turn and westbound through traffic along Dundas Street West. The Halton Region plans on implementing an HOV lane along Dundas Street West, however the timeline on the implementation has not been determined. The Halton Region had also completed an environmental assessment for Dundas Street West within the study area which included a sensitivity analysis with the addition of dual eastbound and southbound left-turn lanes at Dundas Street East and Neyagawa Boulevard.

GHD has completed a sensitivity analysis of the intersection with the implementation of dual left-turn lanes generally consistent with the sensitivity analysis completed in the Dundas Street West EA.

7.1.1 Sensitivity Analysis

The Dundas Street West EA, completed a sensitivity analysis of the operation of the intersection of Dundas Street West and Neyagawa Boulevard with dual left-turn lanes in the eastbound and southbound directions. However, a comparison of historic traffic counts identified a high volume of southbound left-turn traffic in a 2014 traffic count while the updated 2024 traffic count (also used to project traffic volumes up to a 2035 horizon year) saw a shift in the volume of turning traffic will a significantly greater volume in the northbound left-turn movement.

As a result, the sensitivity analysis for the intersection of Dundas Street West and Neyagawa Boulevard maintained the dual eastbound left-turn lane while shifting the southbound dual left-turn lane to a northbound dual left-turn lane.

The results of the sensitivity analysis of the intersection is summarised in the table below for all future traffic conditions including dual left-turn lanes in the eastbound and northbound approaches while maintaining the HOV lane.

Table 6 Capacity analysis of Dundas Street West and Neyagawa Boulevard (Sensitivity Analysis)

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Background 2030	Overall: 0.78 (D) 38 EBL = 0.76 (D) 54 EBT = 0.81 (C) 34 EBR = 0.24 (C) 24 WBL = 0.82 (D) 45 WBT = 0.65 (C) 31 WBR = 0.03 (C) 23 NBL = 0.74 (E) 57 NBTR = 0.49 (D) 38 SBL = 0.35 (C) 34 SBT = 0.46 (D) 41 SBR = 0.72 (D) 51	 EBL = 75 m EBT = 160 m EBR = 35 m WBL = 95 m WBT = 115 m WBR = 0 m NBL = 60 m NBTR = 55 m SBL = 30 m SBT = 45 m SBR = 75 m	Overall: **0.91** (D) 40 EBL = 0.85 (E) 66 EBT = 0.61 (C) 30 EBR = 0.16 (B) 18 WBL = 0.79 (C) 32 WBT = 0.86 (C) 33 WBR = 0.05 (B) 20 NBL = 0.88 (E) 72 NBTR = 0.77 (D) 48 SBL = 0.46 (D) 35 SBT = 0.49 (D) 42 SBR = 0.85 (D) 52	 EBL = 75 m EBT = 105 m EBR = 15 m WBL = 90 m WBT = 190 m WBR = 10 m NBL = 70 m NBTR = 85 m SBL = 30 m SBT = 55 m SBR = 115 m
Future Total 2030	Overall: 0.79 (D) 39 EBL = 0.8 (E) 56 EBT = 0.81 (C) 35 EBR = 0.24 (C) 24 WBL = 0.83 (D) 45 WBT = 0.66 (C) 31 WBR = 0.04 (C) 23 NBL = 0.74 (E) 57 NBTR = 0.49 (D) 38 SBL = 0.45 (C) 35 SBT = 0.49 (D) 41 SBR = 0.72 (D) 51	 EBL = 85 m EBT = 165 m EBR = 35 m WBL = 95 m WBT = 115 m WBR = 0 m NBL = 60 m NBTR = 60 m SBL = 35 m SBT = 50 m SBR = 80 m	Overall: **0.93** (D) 41 EBL = 0.91 (E) 75 EBT = 0.62 (C) 30 EBR = 0.16 (B) 18 WBL = 0.8 (C) 34 WBT = 0.87 (C) 34 WBR = 0.13 (C) 21 NBL = 0.89 (E) 74 NBTR = 0.78 (D) 48 SBL = 0.58 (D) 38 SBT = 0.49 (D) 42 SBR = 0.84 (D) 50	 EBL = 80 m EBT = 110 m EBR = 15 m WBL = 90 m WBT = 205 m WBR = 20 m NBL = 70 m NBTR = 90 m SBL = 35 m SBT = 55 m SBR = 115 m
Future Background 2032	Overall: 0.84 (D) 41 EBL = 0.78 (E) 56 EBT = 0.83 (D) 35 EBR = 0.25 (C) 24 WBL = 0.92 (E) 65 WBT = 0.69 (C) 33 WBR = 0.03 (C) 24 NBL = 0.85 (E) 70 NBTR = 0.52 (D) 39 SBL = 0.36 (C) 32 SBT = 0.43 (D) 40 SBR = 0.76 (D) 53	 EBL = 85 m EBT = 180 m EBR = 40 m WBL = 110 m WBT = 125 m WBR = 5 m NBL = 70 m NBTR = 60 m SBL = 30 m SBT = 50 m SBR = 85 m	Overall: **0.94** (D) 50 EBL = 0.77 (E) 63 EBT = 0.68 (D) 37 EBR = 0.21 (C) 30 WBL = 0.82 (D) 46 WBT = **0.96** (D) 52 WBR = 0.05 (C) 25 NBL = 0.89 (F) 81 NBTR = 0.69 (D) 48 SBL = 0.44 (D) 37 SBT = 0.44 (D) 45 SBR = 0.82 (E) 62	 EBL = 80 m EBT = 150 m EBR = 35 m WBL = 110 m WBT = 280 m WBR = 10 m NBL = 85 m NBTR = 95 m SBL = 30 m SBT = 60 m SBR = 110 m

Future Total 2032	Overall: **0.85** (D) 42 EBL = 0.85 (E) 62 EBT = 0.83 (D) 36 EBR = 0.25 (C) 24 WBL = 0.93 (E) 68 WBT = 0.7 (C) 34 WBR = 0.05 (C) 25 NBL = 0.87 (E) 73 NBTR = 0.54 (D) 40 SBL = 0.53 (C) 34 SBT = 0.49 (D) 40 SBR = 0.75 (D) 51	 EBL = 95 m EBT = 180 m EBR = 40 m WBL = 110 m WBT = 125 m WBR = 10 m NBL = 70 m NBTR = 65 m SBL = 40 m SBT = 55 m SBR = 90 m	Overall: **0.96** (D) 52 EBL = 0.9 (E) 77 EBT = 0.68 (D) 38 EBR = 0.21 (C) 30 WBL = 0.83 (D) 48 WBT = **0.98** (E) 57 WBR = 0.18 (C) 27 NBL = 0.9 (F) 85 NBTR = 0.73 (D) 49 SBL = 0.67 (D) 45 SBT = 0.46 (D) 45 SBR = 0.81 (E) 62	 EBL = 105 m EBT = 150 m EBR = 35 m WBL = 110 m WBT = 285 m WBR = 35 m NBL = 85 m NBTR = 105 m SBL = 45 m SBT = 65 m SBR = 110 m
Future Background 2035	Overall: **0.86** (D) 45 EBL = 0.79 (E) 57 EBT = **0.91** (D) 44 EBR = 0.29 (C) 27 WBL = 0.91 (E) 65 WBT = 0.71 (C) 34 WBR = 0.03 (C) 24 NBL = 0.87 (E) 73 NBTR = 0.54 (D) 41 SBL = 0.37 (C) 32 SBT = 0.44 (D) 41 SBR = 0.78 (D) 55	 EBL = 85 m EBT = 220 m EBR = 45 m WBL = 115 m WBT = 140 m WBR = 5 m NBL = 75 m NBTR = 65 m SBL = 30 m SBT = 50 m SBR = 90 m	Overall: **0.99** (D) 55 EBL = 0.76 (E) 60 EBT = 0.74 (D) 39 EBR = 0.23 (C) 22 WBL = 0.86 (D) 54 WBT = **1.04** (E) 70 WBR = 0.06 (C) 25 NBL = 0.87 (E) 74 NBTR = 0.8 (D) 53 SBL = 0.47 (D) 37 SBT = 0.5 (D) 46 SBR = 0.85 (D) 51	 EBL = 75 m EBT = 145 m EBR = 35 m WBL = 130 m WBT = 290 m WBR = 15 m NBL = 85 m NBTR = 110 m SBL = 30 m SBT = 65 m SBR = 140 m
Future Total 2035	Overall: **0.89** (D) 47 EBL = 0.91 (E) 72 EBT = **0.93** (D) 46 EBR = 0.29 (C) 28 WBL = 0.92 (E) 68 WBT = 0.74 (D) 36 WBR = 0.05 (C) 25 NBL = 0.91 (F) 81 NBTR = 0.56 (D) 41 SBL = 0.65 (D) 37 SBT = 0.53 (D) 42 SBR = 0.76 (D) 52	 EBL = 110 m EBT = 225 m EBR = 50 m WBL = 120 m WBT = 145 m WBR = 10 m NBL = 75 m NBTR = 70 m SBL = 50 m SBT = 65 m SBR = 95 m	Overall: **1.04** (E) 70 EBL = **0.95** (F) 84 EBT = 0.77 (D) 43 EBR = 0.26 (C) 25 WBL = 0.9 (E) 66 WBT = **1.13** (F) 110 WBR = 0.21 (C) 30 NBL = **0.96** (F) 95 NBTR = 0.82 (D) 54 SBL = 0.75 (D) 47 SBT = 0.49 (D) 45 SBR = 0.79 (D) 44	 EBL = 115 m EBT = 155 m EBR = 40 m WBL = 140 m WBT = 320 m WBR = 35 m NBL = 90 m NBTR = 120 m SBL = 50 m SBT = 70 m SBR = 140 m

The results of the sensitivity analysis revealed that the provision of dual left-turn lanes in the eastbound and northbound approaches significantly reduced the capacity constraints of the intersection of Dundas Street West and Neyagawa Boulevard. The sensitivity analysis included lost time adjustments of 2 seconds for the eastbound left-turn movement during the a.m. peak hour only under the 2035 horizon year while a 2 second lost time adjustment was applied to the eastbound left-turn, westbound through, and northbound left-turn movement during the p.m. peak hour under all three horizon years. The sensitivity analysis also included an increase to the cycle length from 140 to 150 seconds during the p.m. peak hour beginning in the 2032 horizon year.

To determine whether the proposed left-turn lanes can be accommodated within both roadway approaches, the available right-of-way and typical cross-sections for each roadway were reviewed. The Region's standard right-of-way widths are defined in the Halton Region Transportation Master Plan Right-of-Way Guidelines. Dundas Street is classified as an N2 Urban roadway and is already built to its maximum right-of-way width of 50 metres. Neyagawa Road, on its approach to Dundas Street, currently has a 35-metre right-of-way; however, it is planned to be widened to a 42-metre right-of-way consistent with its planned C3 Urban road classification. These planned and existing right-of-way widths provide the basis for assessing the feasibility of accommodating the proposed left-turn lanes.

Dundas Street

Dundas Street is classified as an N2 Urban roadway with a 50-metre right-of-way. Within the 50-metre right-of-way, each direction will consist of a 4.2-metre HOV/RBL lane, 2 3.5-metre travel lanes, a 3-metre boulevard, a 3-metre sidewalk/multi-use path, and additional allowances for boulevard space between the sidewalk and the property line that has been identified as having varying widths. The right-of-way also includes a median/turning lane, however it is noted to have a width that varies. The design elements of the typical right-of-way account for 34.4 metres of the 50-metre right-of-way, resulting in 15.6 metres to be allocated between the dual left-turn lanes, a median, the existing right-turn lane, and the additional boulevard space.

For the purpose of completing a preliminary design of the ROW, it was assumed that each of the left-turn lanes would have a width of 3.3 metres and a 2-metre median based on typical industry standards. In addition, the existing right-turn lane has been included in the design with a width of 3.5 metres.

Given the additional 12.1 metres required to accommodate the turning lanes and associated median, this results in 3.5 metres of remaining ROW that can be allocated to the remaining boulevards on either side.

The preliminary design of the 50-metre right-of-way with the dual left-turn lanes is provided in the figure below, based on the Region's typical cross-section, and demonstrates that the proposed dual-left-turn lanes can be accommodated within the 50-metre ROW provided on Dundas Street.

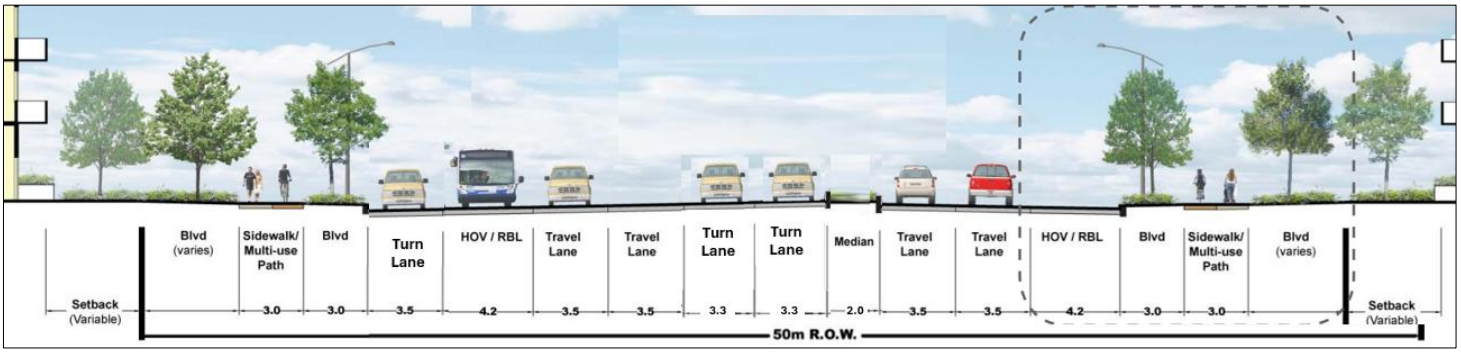


Figure 20 Preliminary Design – 50m ROW with Dual Left-turn Lanes

Neyagawa Boulevard

Neyagawa Boulevard is classified as a C3 Urban roadway with a planned 42-metre right-of-way. Within the 42-metre right-of-way, each direction will consist of a 4.2 metre travel lane, a 3.5-metre travel lane, a 3-metre boulevard, a 3-metre sidewalk/multi-use path, and additional boulevard space between the sidewalk and the property line with varying widths. The right-of-way also includes a median ranging from 0 to 5.0 metres. The design elements of the typical right-of-way excluding the median account for 27.4 metres of the 42-metre planned right-of-way, resulting in 14.6 metres to be allocated between the dual left-turn lanes, a median, the existing right-turn lane, and the additional boulevard space.

Similarly to Dundas Street, it was assumed that each of the left-turn lanes would have a width of 3.3 metres and a 2-metre median based on typical industry standards. In addition, the existing right-turn lane has been included in the design with a width of 3.5 metres.

Given the additional 12.1 metres required to accommodate the turning lanes and associated median, this results in 2.5 metres of remaining ROW that can be allocated to the remaining boulevards on either side.

The preliminary design of the 42-metre right-of-way with the dual left-turn lanes is provided in the figure below, based on the Region's typical cross-section, and demonstrates that the proposed dual-left-turn lanes can be accommodated within the future 42-metre ROW planned for Neyagawa Boulevard.

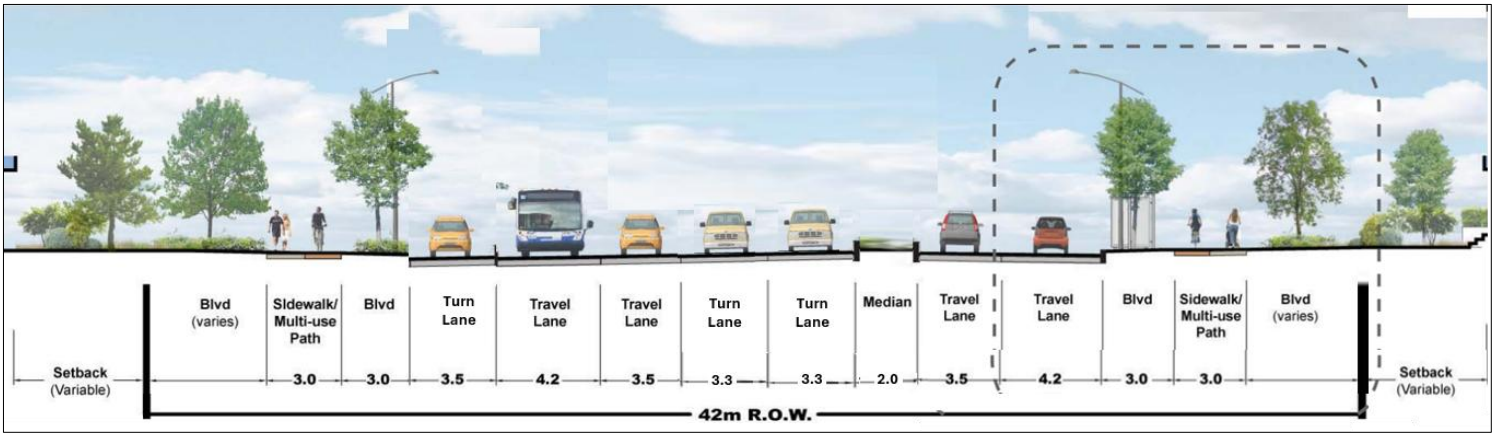


Figure 21 Preliminary Design – 42m ROW with Dual Left-turn Lanes

7.2 Neyagawa Boulevard and Sixteen Mile Drive

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in the following table.

Table 7 Capacity analysis of Neyagawa Boulevard and Sixteen Mile Drive

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2024	Overall: 0.42 (B) 10 EBTLR = 0.01 (B) 16 WBTLR = 0.55 (C) 20 NBL = 0.05 (A) 7 NBTR = 0.38 (A) 9 SBL = 0.06 (A) 7 SBTR = 0.36 (A) 9	 EBTLR = 0 m WBTLR = 25 m NBL = 5 m NBTR = 40 m SBL = 5 m SBTR = 40 m	Overall: 0.53 (B) 16 EBTLR = 0.04 (B) 16 WBTLR = 0.68 (C) 24 NBL = 0.11 (B) 11 NBTR = 0.48 (B) 15 SBL = 0.16 (A) 10 SBTR = 0.41 (B) 13	 EBTLR = 10 m WBTLR = 55 m NBL = 10 m NBTR = 55 m SBL = 10 m SBTR = 50 m
Future Background 2030	Overall: 0.53 (B) 14 EBTLR = 0.01 (B) 16 WBTLR = 0.62 (C) 22 NBL = 0.06 (B) 10 NBTR = 0.51 (B) 14 SBL = 0.14 (A) 9 SBTR = 0.43 (B) 12	 EBTLR = 0 m WBTLR = 45 m NBL = 5 m NBTR = 60 m SBL = 10 m SBTR = 55 m	Overall: 0.67 (C) 20 EBTLR = 0.04 (B) 17 WBTLR = 0.79 (C) 32 NBL = 0.12 (B) 13 NBTR = 0.62 (B) 20 SBL = 0.37 (B) 12 SBTR = 0.46 (B) 16	 EBTLR = 10 m WBTLR = 80 m NBL = 10 m NBTR = 80 m SBL = 20 m SBTR = 65 m
Future Total 2030	Overall: 0.53 (B) 15 EBTLR = 0.03 (B) 16 WBTLR = 0.63 (C) 23 NBL = 0.17 (A) 9 NBTR = 0.5 (B) 14 SBL = 0.13 (B) 10 SBTR = 0.47 (B) 14	 EBTLR = 5 m WBTLR = 50 m NBL = 10 m NBTR = 60 m SBL = 10 m SBTR = 55 m	Overall: 0.67 (C) 21 EBTLR = 0.06 (B) 18 WBTLR = 0.8 (C) 33 NBL = 0.36 (B) 12 NBTR = 0.61 (B) 19 SBL = 0.36 (B) 14 SBTR = 0.55 (C) 20	 EBTLR = 10 m WBTLR = 80 m NBL = 25 m NBTR = 80 m SBL = 20 m SBTR = 70 m
Future Background 2032	Overall: 0.55 (B) 14 EBTLR = 0.01 (B) 16 WBTLR = 0.63 (C) 22 NBL = 0.06 (B) 10 NBTR = 0.53 (B) 14 SBL = 0.15 (A) 9 SBTR = 0.45 (B) 12	 EBTLR = 0 m WBTLR = 50 m NBL = 5 m NBTR = 65 m SBL = 10 m SBTR = 55 m	Overall: 0.69 (C) 21 EBTLR = 0.04 (B) 17 WBTLR = 0.79 (C) 32 NBL = 0.13 (B) 13 NBTR = 0.66 (C) 21 SBL = 0.4 (B) 13 SBTR = 0.49 (B) 17	 EBTLR = 10 m WBTLR = 85 m NBL = 10 m NBTR = 85 m SBL = 20 m SBTR = 65 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2032	Overall: 0.56 (B) 16 EBTLR = 0.05 (B) 18 WBTLR = 0.67 (C) 26 NBL = 0.26 (A) 9 NBTR = 0.49 (B) 13 SBL = 0.14 (B) 11 SBTR = 0.5 (B) 15	 EBTLR = 5 m WBTLR = 50 m NBL = 15 m NBTR = 65 m SBL = 10 m SBTR = 60 m	Overall: 0.73 (C) 23 EBTLR = 0.1 (B) 18 WBTLR = 0.83 (D) 36 NBL = 0.59 (B) 14 NBTR = 0.62 (B) 20 SBL = 0.38 (B) 16 SBTR = 0.63 (C) 23	 EBTLR = 15 m WBTLR = 85 m NBL = 40 m NBTR = 85 m SBL = 20 m SBTR = 75 m
Future Background 2035	Overall: 0.56 (B) 15 EBTLR = 0.01 (B) 17 WBTLR = 0.67 (C) 25 NBL = 0.06 (B) 11 NBTR = 0.55 (B) 15 SBL = 0.15 (A) 9 SBTR = 0.45 (B) 12	 EBTLR = 0 m WBTLR = 55 m NBL = 5 m NBTR = 70 m SBL = 10 m SBTR = 60 m	Overall: 0.72 (C) 22 EBTLR = 0.04 (B) 17 WBTLR = 0.82 (C) 34 NBL = 0.13 (B) 14 NBTR = 0.68 (C) 22 SBL = 0.45 (B) 14 SBTR = 0.51 (B) 18	 EBTLR = 10 m WBTLR = 100 m NBL = 10 m NBTR = 90 m SBL = 20 m SBTR = 70 m
Future Total 2035	Overall: 0.6 (B) 17 EBTLR = 0.09 (B) 18 WBTLR = 0.69 (C) 27 NBL = 0.35 (B) 10 NBTR = 0.55 (B) 15 SBL = 0.15 (B) 11 SBTR = 0.55 (B) 16	 EBTLR = 10 m WBTLR = 55 m NBL = 20 m NBTR = 70 m SBL = 10 m SBTR = 65 m	Overall: 0.81 (C) 26 EBTLR = 0.14 (B) 19 WBTLR = **0.86** (D) 41 NBL = 0.72 (B) 20 NBTR = 0.64 (C) 21 SBL = 0.43 (B) 18 SBTR = 0.72 (C) 27	 EBTLR = 15 m WBTLR = 100 m NBL = 60 m NBTR = 90 m SBL = 20 m SBTR = 85 m

Under existing traffic conditions, the signalized intersection of Neyagawa Boulevard and Sixteen Mile Drive is operating at satisfactory levels with an overall v/c ratio of 0.42 LOS B during the a.m. peak hour and 0.53 LOS B during the p.m. peak hour. The intersection currently operates without a critical movement during both peak hours.

With the addition of corridor growth, background development traffic, and signal improvements to mitigate delays for the 2030 future background traffic scenario, the overall reported v/c of the intersection is expected to increase to 0.53 LOS B during the a.m. peak hour and 0.67 LOS C during the p.m. peak hour. The intersection is reported to continue to operate without any critical movements.

Under the 2030 future total traffic scenario, with the addition of site generated traffic from the first phase of construction, the intersection's overall v/c is reported to remain at 0.53 LOS B during the a.m. peak hour and 0.67 LOS C during the p.m. peak hour. The intersection continues to operate without any critical movements during both peak hours.

With the continued addition of corridor growth, as well as the same background development traffic and signal improvements to mitigate delays for the 2032 future background traffic scenario, the overall reported v/c of the intersection is expected to increase to 0.55 LOS B during the a.m. peak hour and 0.69 LOS C during the p.m. peak hour. The intersection continues to operate without any critical movements.

With the addition of site generated traffic from the first two phases of construction, the intersection's overall v/c is reported to remain at 0.56 LOS B during the a.m. peak hour and increase to 0.73 LOS C during the p.m. peak hour. The intersection continues to operate without any critical movements.

With further corridor growth, as well as the same background development traffic and signal improvements to mitigate delays for the 2035 future background traffic scenario, the overall reported v/c of the intersection is expected to increase to 0.56 LOS B during the a.m. peak hour and 0.72 LOS C during the p.m. peak hour. The intersection continues to operate without any critical movements.

With the addition of site generated traffic from the full build-out of the site, the intersection's overall v/c is reported to increase to 0.60 LOS B during the a.m. peak hour and 0.81 LOS C during the p.m. peak hour. The intersection has

begun to report a critical movement with the westbound approach reported to operate with a v/c ratio of 0.86 LOS D, however it operates below the theoretical threshold of 1.00.

There are no geometric improvements recommended for the intersection as a result of the proposed development.

7.3 Dundas Street West and Street A

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 8 Capacity analysis of Dundas Street West and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2030	WBR = 0 (A) 0 SBR = 0.03 (A) 9	WBR = 0 m SBR = 5 m	WBR = 0 (A) 0 SBR = 0.06 (B) 10	WBR = 0 m SBR = 5 m
Future Total 2032	WBR = 0 (A) 0 SBR = 0.06 (A) 9	WBR = 0 m SBR = 5 m	WBR = 0 (A) 0 SBR = 0.11 (B) 11	WBR = 0 m SBR = 5 m
Future Total 2035	WBR = 0.02 (A) 0 SBR = 0.1 (A) 10	WBR = 0 m SBR = 5 m	WBR = 0.05 (A) 0 SBR = 0.18 (B) 11	WBR = 0 m SBR = 5 m

Under future total traffic conditions, the proposed right-in/right-out access at Dundas Street West and Street is reported to operate at satisfactory levels with no delays or queueing reported along Dundas Street West. The southbound approach is reported to operate at satisfactory levels with a delay of 10 and 11 seconds during the a.m. and p.m. peak hours respectively and a 95th percentile queue of 5 metres during both peak hours.

7.4 Sixteen Mile Drive and Street A

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 9 Capacity analysis of Sixteen Mile Drive and Street A

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2030	EBTLR = 0 (A) 0 WBTLR = 0 (A) 0 NBTLR = 0 (A) 9 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0 (A) 0 WBTLR = 0 (A) 0 NBTLR = 0 (A) 10 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 0 m NBTLR = 5 m SBTLR = 0 m
Future Total 2032	EBTLR = 0 (A) 0 WBTLR = 0.02 (A) 4 NBTLR = 0 (A) 10 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0 (A) 0 WBTLR = 0.02 (A) 3 NBTLR = 0.01 (B) 10 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTLR = 5 m SBTLR = 0 m
Future Total 2035	EBTLR = 0 (A) 0 WBTLR = 0.03 (A) 5 NBTLR = 0.01 (A) 9 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTLR = 5 m SBTLR = 0 m	EBTLR = 0 (A) 0 WBTLR = 0.04 (A) 4 NBTLR = 0.04 (A) 9 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 5 m NBTLR = 5 m SBTLR = 0 m

Under future total traffic conditions, the proposed intersection of Sixteen Mile Drive and Street A is operating at satisfactory levels with low levels of delay and queuing. Under the ultimate horizon year, the westbound and northbound approaches are reporting 95th percentile queue lengths of 5 metres during both peak hours with the greatest delay occurring in the northbound approach, a delay of 9 seconds during both peak hours.

7.5 Sixteen Mile Drive and Street B

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 10 Capacity analysis of Sixteen Mile Drive and Street B

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2030	EBTR = 0.01 (A) 0 WBTL = 0.03 (A) 5 NBLR = 0.03 (A) 8	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.02 (A) 0 WBTL = 0.07 (A) 5 NBLR = 0.01 (A) 8	EBTR = 0 m WBTL = 5 m NBLR = 5 m
Future Total 2032	EBTR = 0.02 (A) 0 WBTL = 0.03 (A) 3 NBLR = 0.03 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.02 (A) 0 WBTL = 0.07 (A) 3 NBLR = 0.01 (A) 8	EBTR = 0 m WBTL = 5 m NBLR = 5 m
Future Total 2035	EBTR = 0.03 (A) 0 WBTL = 0.05 (A) 4 NBLR = 0.05 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.03 (A) 0 WBTL = 0.1 (A) 4 NBLR = 0.02 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m

Under future total traffic conditions, the proposed intersection of Sixteen Mile Drive and Street B is operating at satisfactory levels with low levels of delay and queuing. Under the ultimate horizon year, the westbound and northbound approaches are reporting 95th percentile queue lengths of 5 metres during both peak hours with the greatest delay occurring in the northbound approach (9 second delays during both peak hours).

7.6 Street A and Street B

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 11 Capacity analysis of Street A and Street B

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2030	WBLR = 0.01 (A) 9 NBTR = 0 (A) 0 SBTL = 0 (A) 0	WBLR = 5 m NBTR = 0 m SBTL = 0 m	WBLR = 0.02 (A) 9 NBTR = 0 (A) 0 SBTL = 0 (A) 0	WBLR = 5 m NBTR = 0 m SBTL = 0 m
Future Total 2032	WBLR = 0.01 (A) 9 NBTR = 0 (A) 0 SBTL = 0 (A) 0	WBLR = 5 m NBTR = 0 m SBTL = 0 m	WBLR = 0.02 (A) 9 NBTR = 0 (A) 0 SBTL = 0 (A) 0	WBLR = 5 m NBTR = 0 m SBTL = 0 m
Future Total 2035	WBLR = 0.04 (A) 9 NBTR = 0.02 (A) 0 SBTL = 0 (A) 0	WBLR = 5 m NBTR = 0 m SBTL = 0 m	WBLR = 0.06 (A) 10 NBTR = 0.05 (A) 0 SBTL = 0 (A) 0	WBLR = 5 m NBTR = 0 m SBTL = 0 m

Under future total traffic conditions, the proposed intersection of Street A and Street B is operating at satisfactory levels with low levels of delay and queuing. Under the ultimate horizon year, the westbound approach is reporting 95th percentile queue lengths of 5 metres during both peak hours with the greatest delay occurring in the westbound approach (9 and 10 second delays during the a.m. and p.m. peak hours, respectively).

7.7 Neyagawa Boulevard and Block 1 Access

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 12 Capacity analysis of Neyagawa Boulevard and Block 1 Access

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2030	EBR = 0.08 (A) 10 SBTR = 0.18 (A) 0	EBR = 5 m SBTR = 0 m	EBR = 0.07 (A) 10 SBTR = 0.2 (A) 0	EBR = 5 m SBTR = 0 m
Future Total 2032	EBR = 0.14 (A) 10 SBTR = 0.18 (A) 0	EBR = 5 m SBTR = 0 m	EBR = 0.11 (A) 10 SBTR = 0.21 (A) 0	EBR = 5 m SBTR = 0 m
Future Total 2035	EBR = 0.22 (B) 10 SBTR = 0.19 (A) 0	EBR = 10 m SBTR = 0 m	EBR = 0.16 (A) 10 SBTR = 0.22 (A) 0	EBR = 5 m SBTR = 0 m

Under future total traffic conditions, the proposed right-in/right-out access to Block 1 on Neyagawa Boulevard is operating at satisfactory levels with low levels of delay and queuing. The southbound approach along Neyagawa Boulevard is reported to operate without any delays or queuing. The approach from Block 1 is reported to operate at satisfactory levels with delays of 10 seconds during both peak hours and 95th percentile queues of 10 metres and 5 metres during the a.m. and p.m. peak hours respectively under the ultimate horizon year.

7.8 Street B and Block 1 Access/Block 2 Access

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 13 Capacity analysis of Street B and Block 1 Access/Block 2 Access

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2030	EBTLR = 0 (A) 0 WBTLR = 0.04 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.03 (A) 7	EBTLR = 0 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m	EBTLR = 0 (A) 0 WBTLR = 0.05 (A) 10 NBTLR = 0 (A) 0 SBTLR = 0.07 (A) 7	EBTLR = 0 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m
Future Total 2032	EBTLR = 0.07 (A) 10 WBTLR = 0.04 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.03 (A) 7	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m	EBTLR = 0.06 (B) 11 WBTLR = 0.05 (A) 10 NBTLR = 0 (A) 0 SBTLR = 0.07 (A) 7	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m
Future Total 2035	EBTLR = 0.12 (B) 11 WBTLR = 0.05 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.03 (A) 5	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m	EBTLR = 0.09 (B) 12 WBTLR = 0.05 (B) 10 NBTLR = 0 (A) 0 SBTLR = 0.07 (A) 6	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m

Under future total traffic conditions, the proposed accesses to Street B from Blocks 1 and 2 is reported to operate at satisfactory levels with low levels of delay and queuing.

The greatest delays are reported to occur in the eastbound approach during the ultimate horizon year with an 11 second delay during the a.m. peak hour and 12 seconds during the p.m. peak hour. In addition, the eastbound, westbound, and northbound approaches are all operating with 95th percentile queue lengths of 5 metres during both peak hours.

7.9 Sixteen Mile Drive and Block 2 Access

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 14 Capacity analysis of Sixteen Mile Drive and Block 2 Access

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2032	EBTR = 0.01 (A) 0 WBTL = 0.03 (A) 5 NBLR = 0.06 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.02 (A) 0 WBTL = 0.08 (A) 6 NBLR = 0.07 (B) 11	EBTR = 0 m WBTL = 5 m NBLR = 5 m
Future Total 2035	EBTR = 0.01 (A) 0 WBTL = 0.04 (A) 5 NBLR = 0.09 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.04 (A) 0 WBTL = 0.1 (A) 6 NBLR = 0.12 (B) 12	EBTR = 0 m WBTL = 5 m NBLR = 5 m

Under future total traffic conditions, the proposed access to Sixteen Mile Drive from Block 2 is reported to operate at satisfactory levels. The proposed access to Sixteen Mile Drive is reported to operate with a 9 second delay during the a.m. peak hour and 12 second delay during the p.m. peak hour.

7.10 Street B and Block 3 Access

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the future total traffic conditions are summarized in the following table.

Table 15 Capacity analysis of Street B and Block 3 Access

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2035	EBTR = 0.01 (A) 0 WBTL = 0.01 (A) 5 NBLR = 0.09 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m	EBTR = 0.03 (A) 0 WBTL = 0.03 (A) 5 NBLR = 0.07 (A) 9	EBTR = 0 m WBTL = 5 m NBLR = 5 m

Under future total traffic conditions, the proposed accesses to Street B from Block 3 is reported to operate at satisfactory levels with low levels of delay and queuing. The access is reported to operate with a 9 second delay and 95th percentile queue of 5 metres during both peak hours.

8. Parking Review

GHD reviewed the Town's current Zoning By-Law parking and loading requirements for the subject site.

8.1 Town of Oakville By-Law 2009-189

8.1.1 Vehicular Parking

The current Town of Oakville Zoning By-Law 2009-189 minimum parking requirements are found in Section 5.1.2.1, Table 5.1A for residential uses. The By-Law requirement for the subject site is as follows:

- Apartment – More than 4 storey
    - Up to 1.25 parking spaces per unit, plus
    - 0.20 parking spaces per unit for visitors
- Retail
    - 1 parking space per 30 m^2 of leasable floor area, minimum

- 1 parking space per 20 m^2 of leasable floor area, maximum

The minimum parking required for the subject site with 2,278 dwelling units is as follows:

- Block 1
  - 1.25 parking spaces per unit x 645 units = 806 spaces
  - 0.20 parking spaces per unit x 645 units = 129 spaces for visitors
  - 1 parking space per 30 m^2 of leasable floor area x 1,032 m^2 of retail = 34 spaces, minimum
  - 1 parking space per 20 m^2 of leasable floor area x 1,032 m^2 of retail = 52 spaces, maximum
- Block 2
  - 1.25 parking spaces per unit x 971 units = 1,214 spaces
  - 0.20 parking spaces per unit x 971 units = 194 spaces for visitors
  - 1 parking space per 30 m^2 of leasable floor area x 471 m^2 of retail = 16 spaces, minimum
  - 1 parking space per 20 m^2 of leasable floor area x 471 m^2 of retail = 24 spaces, maximum
- Block 3
  - 1.25 parking spaces per unit x 562 units = 703 spaces
  - 0.20 parking spaces per unit x 562 units = 112 spaces for visitors

In total, the subject site is required to provide up to 2,723 resident spaces, a minimum of 435 visitor parking spaces, and the retail component is required to provide a minimum of 50 spaces and a maximum of 76 spaces.

8.1.2 Accessible Parking

The minimum requirement for accessible parking spaces can also be found in the Town of Oakville Zoning By-Law 2009-189, Section 5.2.1, Table 5.2. The minimum By-Law requirement accessible parking for the subject site is based on the number of parking spaces provided on the lot, as follows:

- Number of parking spaces provided on the lot:
  - Less than 10 spaces: 0 accessible parking spaces
  - 11 to 25 spaces: 1 accessible parking spaces
  - 26 to 50 spaces: 2 accessible parking spaces
  - 51 to 75 spaces: 3 accessible parking spaces
  - 76 to 100 spaces: 4 accessible parking spaces
  - 101 to 150 spaces: 5 accessible parking spaces
  - 151 to 200 spaces: 6 accessible parking spaces
  - 201 to 300 spaces: 7 accessible parking spaces
  - 301 to 400 spaces: 8 accessible parking spaces
  - 401 to 500 spaces: 9 accessible parking spaces
  - 501 to 1,000 spaces: 2% of the total
  - 1,001 spaces and over: 20 spaces plus 1 for each 100 over 1,000

The minimum number of accessible parking spaces required for the subject site is as follow, based on the number of parking spaces provided for each block:

- Block 1
  - Number of parking spaces provided: 795 spaces
  - 2% of 795 spaces = 16 barrier-free spaces
- Block 2
  - Number of parking spaces provided: 1,197 spaces
  - 20 spaces, plus 1 space for each 100 over 1,000 = 22 barrier-free spaces
- Block 3
  - Number of parking spaces provided: 751 spaces
  - 2% of 751 spaces = 15 barrier-free spaces

In total, 53 barrier-free parking spaces are required under the Town's current By-Law.

8.1.3 Bicycle Parking

Under the Town's Zoning By-Law 2009-189, the bicycle parking requirement are found in Section 5.7.1, Table 5.7A. The minimum By-Law requirement for bicycle parking for the subject site is as follows:

- Residential uses
  - Bicycle parking spaces – Occupant
    - 0.75 spaces per dwelling unit
  - Bicycle parking spaces – Visitor
    - 0.25 spaces per dwelling unit
- Non-residential uses
    - Bicycle parking spaces required at a rate of 7% of automobile parking spaces, as required by the Zoning By-law, including a minimum of 5 bicycle parking spaces for visitors

Additionally, as per Section 5.7. iv, a maximum of 200 bicycle parking spaces shall be required.

The minimum number of bicycle parking spaces required for the subject site is as follows:

- Block 1
    - 0.75 spaces per dwelling unit x 645 units = 484 spaces
    - 0.25 spaces per dwelling unit x 645 units = 161 spaces
    - 7% of 34 minimum parking spaces required for the non-residential component, with a minimum of 5 spaces required = 5 spaces
- Block 2
    - 0.75 spaces per dwelling unit x 971 units = 728 spaces
    - 0.25 spaces per dwelling unit x 971 units = 243 spaces
    - 7% of 16 minimum parking spaces required for the non-residential component, with a minimum of 5 spaces required = 5 spaces
- Block 3
    - 0.75 spaces per dwelling unit x 562 units = 422 spaces
    - 0.25 spaces per dwelling unit x 562 units = 141 spaces

However, due to the stipulation that a maximum of 200 bicycle parking spaces can be required, its is assumed that each block is required to provide a minimum of 200 bicycle parking spaces. Maintaining the 0.75 and 0.25 bicycle space requirement for occupants and visitors, respectively, for each block, a total of 600 bicycle parking spaces is required for the site, consisting of 450 spaces for occupants and 150 spaces for visitors.

8.1.4 Loading Spaces

Loading spaces are not required under the Town's North Oakville Zoning By-law

8.2 Proposed Site Parking

The following table summarizes the minimum By-law requirements and the proposed parking/loading supply for the subject site.

Table 16 Parking Requirements and Provisions

Type	GFA	By-Law 2009-189 Requirement	Provided
Vehicle Parking	2,178 dwelling units and 1,503 m^2 of retail GFA • Block 1: 645 dwelling units • Block 2: 971 dwelling units • Block 3: 562 dwelling units	Up to 2,723 resident spaces, a minimum of 435 visitor parking spaces, and the retail component is required to provide a minimum of 50 spaces and a maximum of 76 spaces	2,284 resident spaces and 499 visitor spaces, shared between the residential visitor and non-residential uses
Barrier Free Parking		53 barrier free spaces	95 barrier free spaces
Bicycle Parking		A minimum of 600 bicycle parking spaces • 450 spaces for occupants • 150 spaces for visitors, shared between residential and retail uses	1,457 bicycle parking spaces
Loading Spaces		No minimum requirement	7 loading areas

The subject site meets or exceeds the Town's Zoning By-Law requirement for vehicle parking, barrier free spaces, bicycle parking and loading spaces.

9. Site Plan Review

9.1 Access Width and Radii

Site access design standards for the Town of Oakville are established under their Department of Public Works Standard Drawings, STD. 10-2 (Driveway Entrance Criteria). Site accesses for multiple residential land uses on major roadways are required to have a minimum width of 7.5 metres and a maximum width of 9.0 metres with its minimum curb return radii required to be a minimum of 6.0 metres and a maximum of 7.5 metres.

Site access design standards for the Region of Halton are established under their Access Management Guideline, Section 5.2. Site accesses for residential land uses on urban roadways are required to have a minimum width of 3.5 metres and a maximum width of 7.5 metres with its minimum curb return radii required to be a minimum of 1.5 metres and a maximum of 4.5 metres.

The subject site proposes to include one access onto Regional roads and four accesses onto existing or proposed Town roads.

The right-in/right-out access onto Neyagawa Boulevard is located on a Regional road and is subject to their design standards. The access is proposed to be design with a width of 9.8 metres, including a 2.8 metre wide median, and a 7.5 metre curb return radius, satisfying the Region's design standards.

The four accesses onto existing or proposed Town roads and their respective specifications are as follows:

- Street B and Block 1 Access: width of 7.5 metres, and inbound/outbound curb return radius of 7.5 metres
- Street B and Block 2 Access: width of 7.5 metres, and inbound/outbound curb return radius of 7.5 metres
- Street B and Block 3 Access: width of 8.0 metres, and inbound/outbound curb return radius of 7.5 metres
- Block 2 Access and Sixteen Mile Drive: width of 7.6 metres, and inbound/outbound curb return radius of 7.5 metres

The proposed site accesses meet the Region and Town's design requirements for multi residential land uses.

10. Travel Demand Management

10.1 Travel Demand Management

Travel Demand Management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. TDM strategies have multiple benefits including the following:

- Reduced auto-related emissions to improve air quality;
- Decreased traffic congestion to reduce travel time;
- Increased travel options for businesses and commuters;
- Reduced personal transportation costs and energy consumptions; and
- Support Provincial smart growth objectives.

The combined benefits listed above will assist in creating a more active and livable community through improvements to overall active transportation standards for the local businesses and surrounding community.

10.2 Existing TDM Opportunities

10.3 Recommended TDM Measures

Table 17 Recommended TDM Strategies

TDM Measure	Responsibility	Cost	Note
Hard Measures			

Pedestrian connections	Applicant	Integrated into the overall development cost	Site plan includes a walkway system providing a connection to the municipal and regional right-of-ways
Bicycle Parking	Applicant	Integrated into the overall development cost. Short term bike parking costs are estimated at $300 per rack that can accommodate 2 bikes. Values to be confirmed through detailed design.	Bicycle parking will be provided matching and exceeding the requirements of the Town's Bylaw for long and short term bicycle parking. Short-term bicycle parking will be provided within well-lit and visible areas.
Soft Measures			
Provide Individualized Marketing Programs & Travel Plans	Applicant	To be determined.	Information packages distributed to residents (Oakville Transit, GO Transit, cycling maps)
Communication strategy	Applicant	To be determined.	Providing information promoting sustainable travel options to employees.

11. Pedestrian Circulation Plan

GHD has prepared a pedestrian circulation plan, provided in **Figure 22**, identifying the existing pedestrian active transportation facilities, the future active transportation facilities along the regional/municipal right-of-way, and the internal pedestrian circulation.

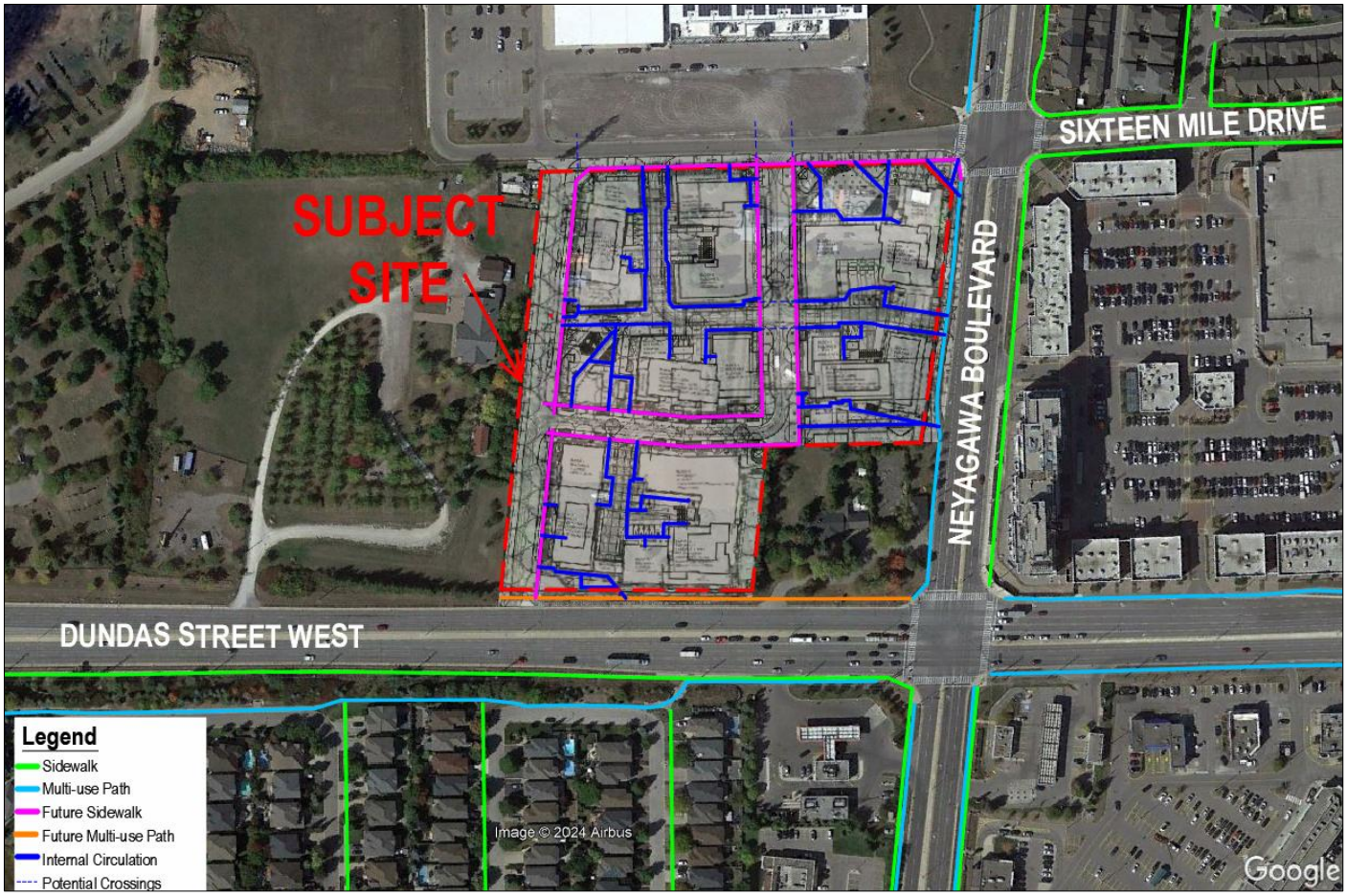


Figure 22 Pedestrian Circulation Plan

12. Bicycle Parking Plan

GHD has prepared a bicycle parking plan, provided in **Figure 23** and **Figure 24**, identifying the routes to be taken between the municipal/regional roadways and the long-term bicycle parking spaces located on the ground floor and P1 underground parking level.

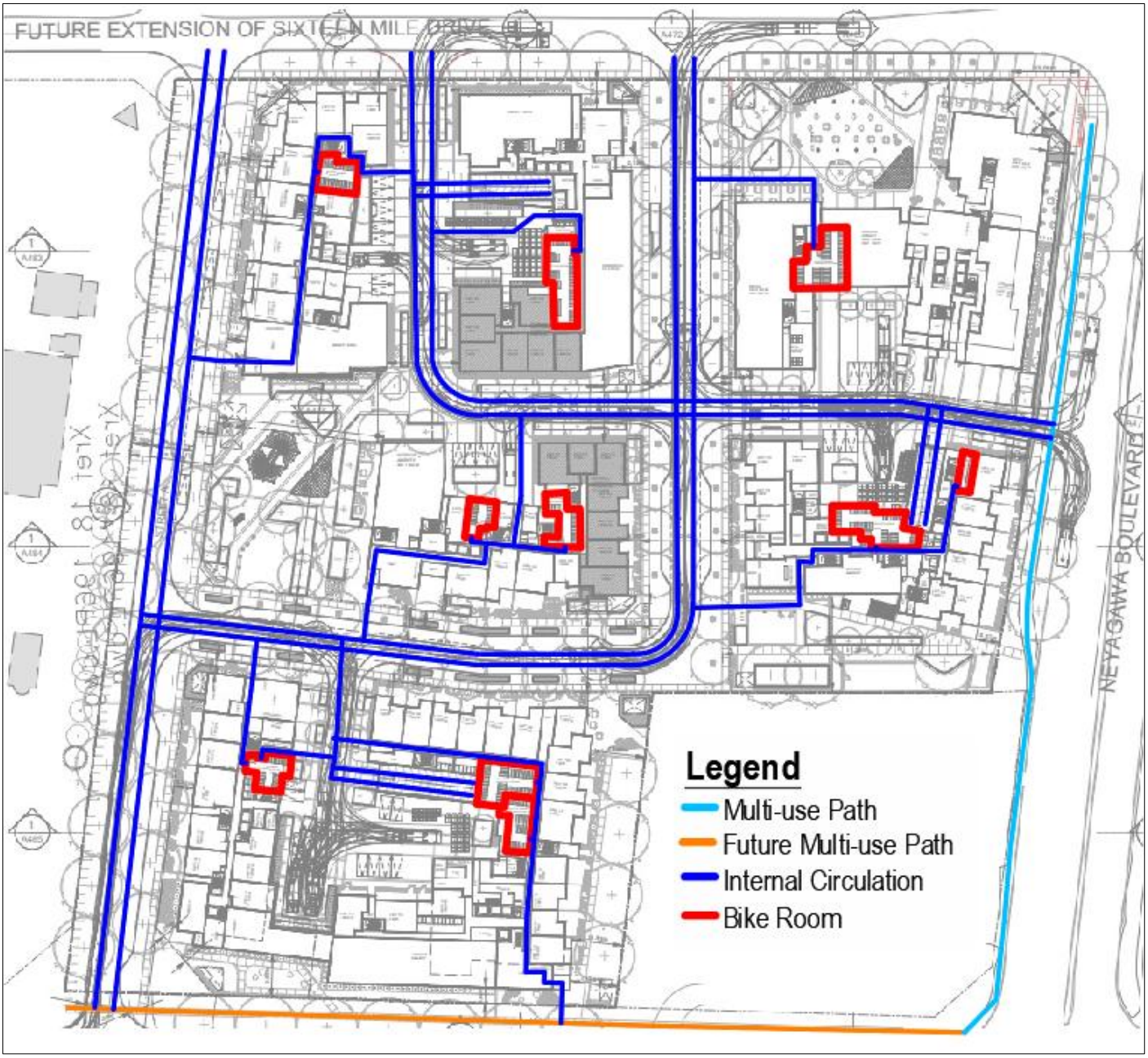


Figure 23 Bicycle Circulation Plan – Ground Floor

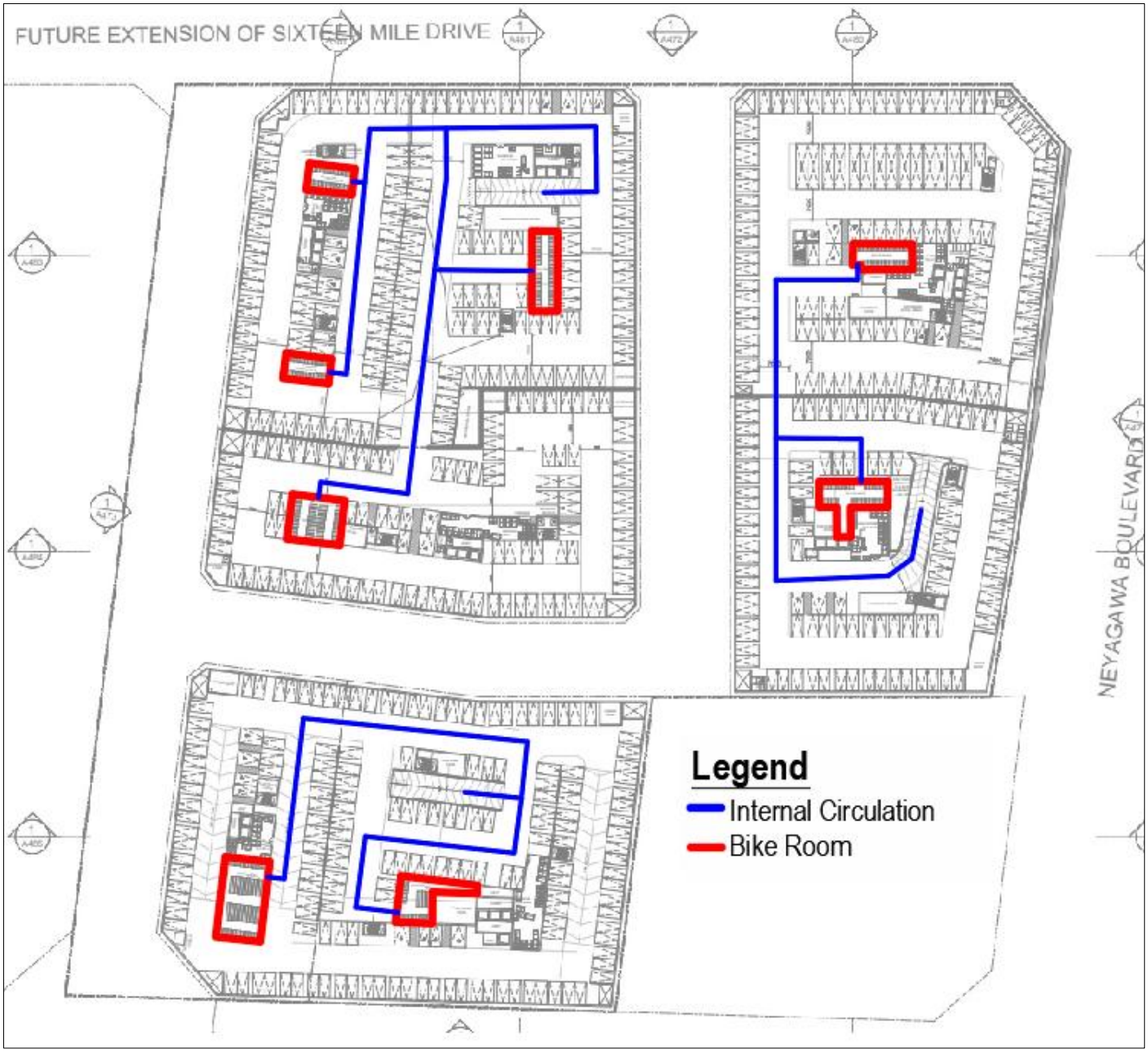


Figure 24 Bicycle Circulation Plan – Underground P1

The type of bicycle rack to be used within the long-term bicycle parking rooms have not yet been determined, however, allowances have been made on the bike rooms for a 2-metre spacing between bicycle racks, however 1.8 metres is typically sufficient based on the various types of bike racks available.

The figure below is an example of a typical pull-down bicycle parking rack



Figure 25 Typical Bike Room Pull-down Rack

13. Vehicle Swept Path Analysis

GHD undertook a vehicle swept path analysis to assess the site plan circulation for an emergency vehicle, MSU vehicles, waste collection vehicle, and passenger vehicle within the site. The results of the analysis are provided in **Appendix G** and illustrate that the site can sufficiently accommodate the aforementioned design vehicles with no issues.

14. Pavement Marking and Signage Plan

A pavement marking and signage plan has been prepared for each block of the subject site and is provided in **Appendix H**.

15. Conclusion

The proposed site plan prepared by Core Architects consists of a residential development within 3 blocks containing 7 high-rise buildings with a total of 2,178 dwelling units and 1,503 m^2

Access to the subject site is proposed via two new roads (Street A and Street B) and a proposed right-in/right-out access to Block 1 on Neyagawa Boulevard. Additional accesses are provided to the three blocks from Sixteen Mile Drive and Street B.

Based on ITE Trip Generation rates, the subject site is expected to generate a total of 488 two-way vehicle trips during the a.m. peak hour consisting of 154 inbound and 334 outbound trips. During the p.m. peak hour, it is expected to generate 652 new two-way vehicle trips consisting of 384 inbound and 268 outbound trips.

Under existing traffic conditions, all intersections are operating at acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours.

Under future traffic conditions, with the addition of corridor growth, background development traffic, and the conversion of one through lane in each direction to an HOV lane on Dundas Street West, and site generated traffic, all intersections are reported to continue to operate with acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours with the exception of the intersection of Dundas Street West and Neyagawa Boulevard.

A sensitivity analysis was completed for the intersection of Dundas Street West and Neyagawa Boulevard to include a dual left-turn lane in the eastbound and northbound approaches. The provision of the dual left-turn lane mitigates the over-capacity operation of all movements with the exception of the westbound through movement during the p.m. peak hour under the 2035 horizon year.

Application of the Town of Oakville By-Law 2009-189 parking rates to the subject site results in a requirement of up to 2,723 vehicle parking spaces for residents, a minimum of 435 parking spaces for visitors, and a minimum of 50 spaces and a maximum of 76 spaces for the retail uses. Of the parking spaces required, a minimum of 53 barrier free spaces is required. A minimum of 600 bicycle parking spaces (450 resident spaces and 150 visitor spaces) are required for the subject site.

The subject site provides a total of 2,284 resident vehicle parking spaces and 499 visitor spaces, shared between the residential visitor and non-residential uses. Of the parking spaces provided, 95 barrier free spaces are provided. 1,457 bicycle parking spaces and 7 loading spaces are also provided. All vehicular parking, bicycle parking, and loading space requirements are met.

The subject site proposes to include two accesses onto Regional roads and four accesses onto existing or proposed Town roads that satisfy the Town and Region guidelines.

TDM measures are proposed for the subject site to encourage employees to explore various modes of transportation in order to reduce their dependency on single occupancy vehicle trips. These measures include bicycle parking and education material.

GHD assessed the site circulation for emergency vehicles, MSU trucks, waste collection vehicles, and passenger vehicles and confirmed no issues with the site circulation.

The traffic study confirms that the proposed residential development can be accommodated on the existing/planned road network.

Appendix A

Terms of Reference

Raf Andrenacci

From: Will Maria
Sent: Tuesday, March 5, 2024 10:17 AM
To: Raf Andrenacci
Subject: FW: Neyagawa Blvd

DISABLEFILINGSTATUS: 0

Will

William C. Maria, P.Eng.
Transportation Planning Lead

GHD Ltd.
T: 905 814 4397 | C: 647 229 8541 | F: 905 890 8499 | E: will.maria@ghd.com
100 Milverton Drive Suite 404, Mississauga, ON L5R 4H1 | **www.ghd.com**

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Please consider our environment before printing this email

From: Syed Rizvi <syed.rizvi@oakville.ca>
Sent: Thursday, February 22, 2024 12:13 AM
To: Will Maria <William.Maria@ghd.com>
Subject: RE: Neyagawa Blvd

Hi Will,

Thanks for providing the TOR's for review. Please see comments that are added in red below.

Thanks,
Syed

From: Will Maria <William.Maria@ghd.com>
Sent: Tuesday, February 20, 2024 11:54 AM
To: Syed Rizvi <syed.rizvi@oakville.ca>
Subject: FW: Neyagawa Blvd

SECURITY CAUTION: This email originated from outside of The Town of Oakville. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Friendly reminder to please provide the Town's response to the ToR for this Project as we discussed last week.
Thanks Syed.

Will

William C. Maria, P.Eng.

Transportation Planning Lead

GHD Ltd.
T: 905 814 4397 | C: 647 229 8541 | F: 905 890 8499 | E: will.maria@ghd.com
100 Milverton Drive Suite 404, Mississauga, ON L5R 4H1 | **www.ghd.com**

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Please consider our environment before printing this email

From: Will Maria <William.Maria@ghd.com>
Sent: Friday, February 9, 2024 12:13 PM
To: Syed Rizvi <syed.rizvi@oakville.ca>
Subject: RE: Neyagawa Blvd

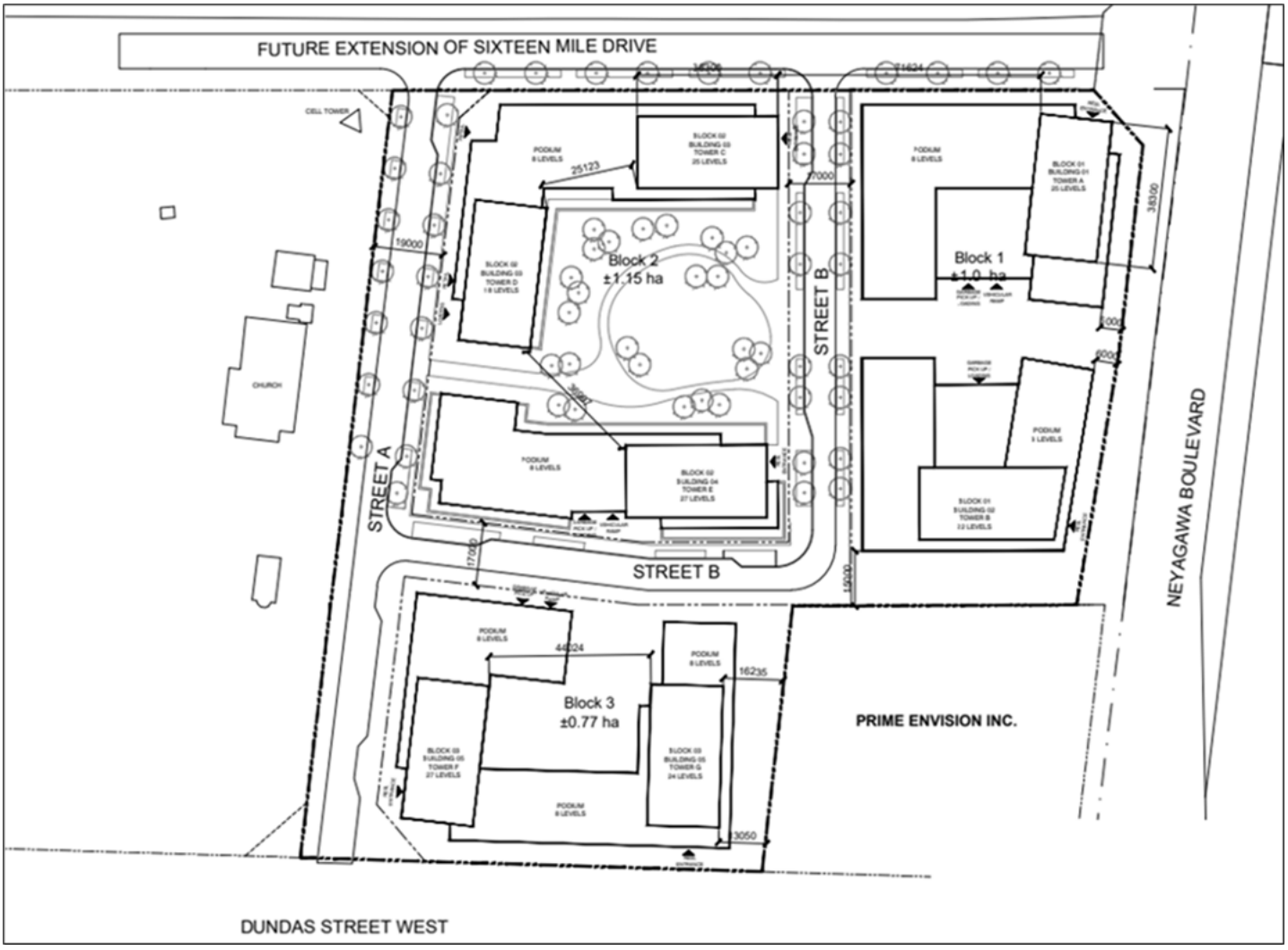
Hi Syed, I was asking about the ToR below that Aquisha forwarded to you.

GHD Inc. has been retained to prepare a Transportation Impact Study for a proposed development on lands located on the northwest corner of Dundas Street West and Neyagawa Boulevard in the Town of Oakville.



The subject site consists of five high-rise buildings within three blocks with a total of 2,491 dwelling units. Confirm 5 building are planned to be build and open simultaneously or phased construction is planned.

Access to the subject site is proposed via two driveways: one driveway along the future extension of Sixteen Mile Drive and one driveway along Street A (a north/south road that will intersect Dundas Street West and the future extension of Sixteen Mile Drive. Both driveways provide connections to Street B, a future roadway in the shape of a backwards "L". All three blocks will have access onto Street B.



In order to properly scope this project, we ask that the Region and Town review and provide comments on the following scope and provide any additional items required as part of the study.

Study intersections

- Existing
  - Dundas Street West and Neyagawa Boulevard
  - Neyagawa Boulevard and Sixteen Mile Drive
- New
  - Dundas Street West and Street A (Right-in/out)
  - Sixteen Mile Drive and Street A (Full moves)
  - Sixteen Mile Drive and site access (Right-in/out)
  - Street A and site access

Traffic Data

Updated traffic counts at the existing study intersections will be undertaken during the a.m. and p.m. peak hours.

Study Peak Hours

Weekday a.m. and p.m. peak hours

Study Horizon Year

2024 (existing) and 2029 (five years from the date of the study), as per the Region's TIS Guidelines. Include existing, buildout year/ phase years (in case phased development is planned) as analysis period (see region and town TIS guidelines).

Background Growth Rate

GHD will consult with Town and Region staff to determine the growth rates to be used.

Background Development Traffic

GHD has identified the following developments within the surrounding area that would generate additional traffic along the study area roadway:

- 393 Dundas Street West
- 407 Dundas Street
- 509 Dundas Street West
- 3009 Gladeside

Please confirm if there are any additional developments that should be included.

Trip Generation

Will be completed using rates published by the ITE Trip Generation 11th Edition, LUC 222 Multifamily Housing (High-Rise).

The directional distribution of traffic approaching and departing the site will be determined based on the TTS 2016 data, existing local patterns, and first principles.

The analysis will identify the transportation system requirements and other measures required to ensure the acceptable operation of the study intersections, including auxiliary turning lanes and other transportation infrastructure improvements.

TAC, Region, and Town guidelines will be reviewed in order to complete an access management.

Review for the site access that reviews corner clearance, driveway spacing, auxiliary lanes, corner radii, and clear throat distance.

GHD will review and assess the appropriateness of the proposed accesses and layby areas and potential queuing concerns onto adjacent roads.

Complete AutoTurn assessment of the proposed loading and parking areas.

Existing TDM opportunities will be identified and future TDM opportunities will be recommended for the site.

The parking supply will be reviewed in accordance with the Town's Zoning By-law

If the above scope is acceptable to the Town and Region, it will form the basis of our scope of work.

Will

William C. Maria, P.Eng.

Raf Andrenacci

From: Khan, Ayesha <Ayesha.Khan@halton.ca>
Sent: Monday, February 5, 2024 9:28 AM
To: Raf Andrenacci
Subject: RE: Terms of Reference - 3056 Neyagawa

You don't often get email from ayesha.khan@halton.ca. Learn why this is important

Hello Raf,
Thank you for circulating to us.

The TOR is generally acceptable. Please find some additional notes below:

Mode Splits:

Halton's 2011 Transportation Master Plan utilizes a transit mode split of 10% for 2021, 15% for 2026 and 20% for 2031. Transit mode splits must be adjusted from the 2011 TMP assumptions to reasonable percentages based on current year and planned horizon years proposed mode splits, established on existing facilities and service in the area to date, and planned/proposed facilities and service. Reasonable assumptions and rationale must be clearly outlined in the Study.

Traffic Data:

Any Regional information (traffic counts, signal timing) if needed, can be obtained from Halton through a request to our Road Operations staff at trafficdatarequets@halton.ca

Growth Rate & HOV Analysis:

Dundas Street is already widened to 6 lanes along this section.

A growth rate of 2% would be acceptable to use.

Dundas Street can be analyzed as six general purpose lanes for year 2024 (based on existing conditions), and four lanes plus HOV lane (with assumption that 20% of the lane capacity is assigned to HOV usage by using a 0.8 lane utilization factor) for year 2029 (build-out).

Background Developments:

Town staff will provide/approve all background developments to consider as part of the study.

Access:

The proposed development must conform to Halton Region's Access By-Law NO. 32-17, a By-Law to prohibit, restrict and regulate access to the Regional Road System to maintain a high level of service for through traffic. The Access By-Law NO. 32-17 is available online at: https://www.halton.ca/Repository/By-law-32-17-Regional-Roads. Section 6.1 (a) of the Access By-law states that "*access to a Regional Road from private property shall be permitted only where such access is necessary because access to a local road is not feasible.*"

Access to a Regional Road must conform to Halton Region's Access Management Guideline (2015). The Access Management Guideline document is available online at: https://www.halton.ca/Repository/Access-Management-Guideline.

General

The TIS report will include:

- *Site Plan and Map,*
- *Size & Number of Development Phases,*
- *Existing Conditions (Study Area Intersections, Road Network, Pedestrian Routes, Cycling Routes, Transit Services),*
- *Existing Traffic Conditions (Site Operating Characteristics, Data Collection/Traffic Counts, Analysis Periods (5 years Ahead),*
- *Future Background Conditions (Horizon Years, Horizon Year Volumes)*
- *Background Traffic Demand (with TMC's < 2 years old),*
- *Background Traffic Demand Forecast (with acceptable growth rates)*
- *Site Generated Traffic (Transit Modal Split, Trip Generation/Distribution/Assignment)*
- *Future Total Traffic Demand,*
- *Capacity Analysis (by Intersection, with LOS, Avg. Delay, V/C ratios),*
- *Traffic Impacts (Tables – Total Traffic with/without Mitigation)*
- *Access Considerations – Existing, Proposed, Geometrics (turn lanes, sight lines),*
- *Recommendations - Identify required/recommended road improvements either as a result of the development impacts, or general non-development improvements.*
- *TDM recommendations (Transit, Pedestrian & Cycling Facilities Analysis)*
- *Conclusions*
- *Appendices with Terms of Reference correspondence from all agencies*

The above is also subject to the review and approval by the Town of Oakville.

Thanks,
Ayesha

Ayesha Khan
Transportation Planning Coordination PM1
Infrastructure Planning & Policy
Public Works
Halton Region
905-825-6000, ext. | 1-866-442-5866



This message, including any attachments, is intended only for the person(s) named above and may contain confidential and/or privileged information. Any use, distribution, copying or disclosure by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please notify us immediately by telephone or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

From: Raf Andrenacci <Raf.Andrenacci@ghd.com>
Sent: Tuesday, January 30, 2024 3:29 PM
To: Khan, Ayesha <Ayesha.Khan@halton.ca>; Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Will Maria <William.Maria@ghd.com>
Subject: Terms of Reference - 3056 Neyagawa

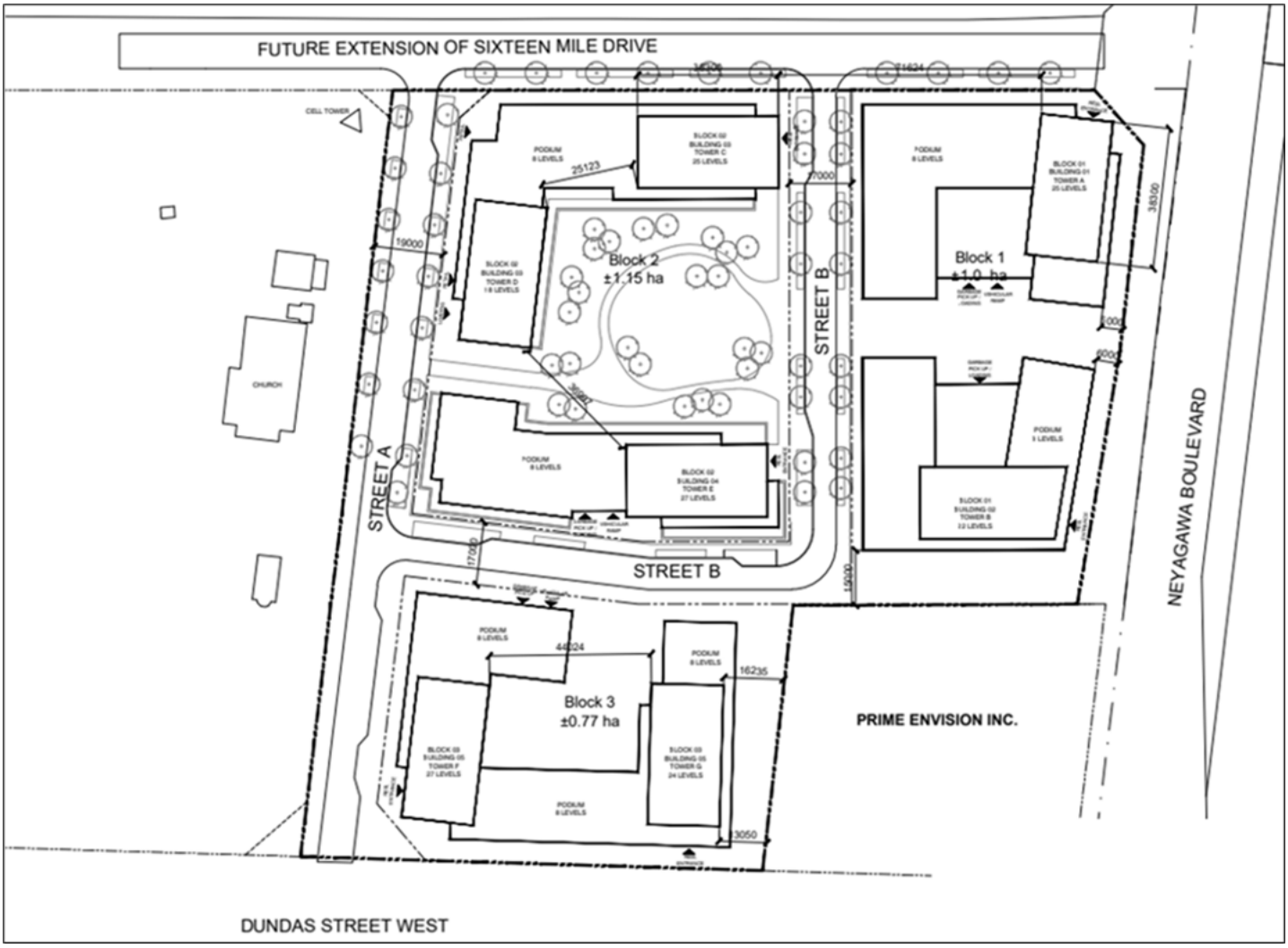
CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you are unsure or need assistance please contact the IT Service Desk.

Hello,
GHD Inc. has been retained to prepare a Transportation Impact Study for a proposed development on lands located on the northwest corner of Dundas Street West and Neyagawa Boulevard in the Town of Oakville.



The subject site consists of five high-rise buildings within three blocks with a total of 2,491 dwelling units.

Access to the subject site is proposed via two driveways: one driveway along the future extension of Sixteen Mile Drive and one driveway along Street A (a north/south road that will intersect Dundas Street West and the future extension of Sixteen Mile Drive. Both driveways provide connections to Street B, a future roadway in the shape of a backwards “L”. All three blocks will have access onto Street B.



In order to properly scope this project, we ask that the Region and Town review and provide comments on the following scope and provide any additional items required as part of the study.

Study intersections

- Existing
  - Dundas Street West and Neyagawa Boulevard
  - Neyagawa Boulevard and Sixteen Mile Drive
- New
  - Dundas Street West and Street A (Right-in/out)
  - Sixteen Mile Drive and Street A (Full moves)
  - Sixteen Mile Drive and site access (Right-in/out)
  - Street A and site access

Traffic Data

Updated traffic counts at the existing study intersections will be undertaken during the a.m. and p.m. peak hours.

Study Peak Hours

Weekday a.m. and p.m. peak hours

Study Horizon Year

2024 (existing) and 2029 (five years from the date of the study), as per the Region's TIS Guidelines

Background Growth Rate

GHD will consult with Town and Region staff to determine the growth rates to be used.

Background Development Traffic

GHD has identified the following developments within the surrounding area that would generate additional traffic along the study area roadway:

- 393 Dundas Street West
- 407 Dundas Street
- 509 Dundas Street West
- 3009 Gladeside

Please confirm if there are any additional developments that should be included.

Trip Generation
Will be completed using rates published by the ITE Trip Generation 11th Edition, LUC 222 Multifamily Housing (High-Rise).

The directional distribution of traffic approaching and departing the site will be determined based on the TTS 2016 data, existing local patterns, and first principles.

The analysis will identify the transportation system requirements and other measures required to ensure the acceptable operation of the study intersections, including auxiliary turning lanes and other transportation infrastructure improvements.

TAC, Region, and Town guidelines will be reviewed in order to complete an access management.
Review for the site access that reviews corner clearance, driveway spacing, auxiliary lanes, corner radii, and clear throat distance.

GHD will review and assess the appropriateness of the proposed accesses and layby areas and potential queuing concerns onto adjacent roads.

Complete AutoTurn assessment of the proposed loading and parking areas.

Existing TDM opportunities will be identified and future TDM opportunities will be recommended for the site.

The parking supply will be reviewed in accordance with the Town's Zoning By-law

If the above scope is acceptable to the Town and Region, it will form the basis of our scope of work.

Thank you,
Raf

CONFIDENTIALITY NOTICE: This email, including any attachments, is confidential and may be privileged. If you are not the intended recipient please notify the sender immediately, and please delete it; you should not copy it or use it for any purpose or disclose its contents to any other person. GHD and its affiliates reserve the right to monitor and modify all email communications through their networks.

Appendix B

Site Plan

FUTURE EXTENSION OF SIXTEEN MILE DRIVE

NEYAGAWA BOULEVARD

PRIME ENVISION INC.

ck 4
8 ha

5
ha

POINTE PROJECT

COREARCHITECTS
130 QUEENS QUAY EAST, SUITE 700, WEST TOWER
TORONTO, ON CANADA M5A 0P6
T +1 416 343 0400 ○ F +1 416 343 0401
INFO@COREARCHITECTS.COM
WWW.COREARCHITECTS.COM

Appendix C

Traffic Data

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #24-098 - GHD

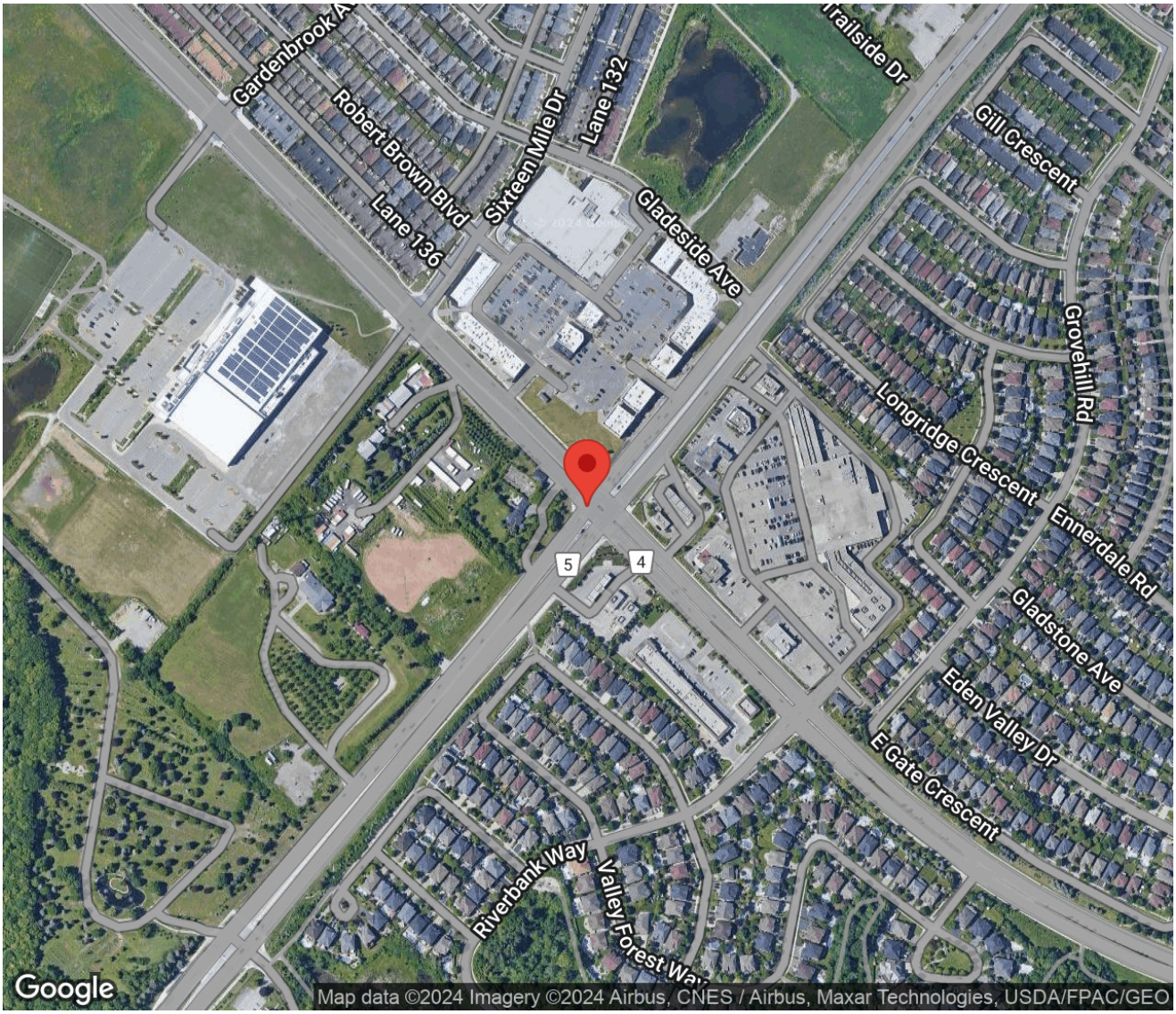
Intersection Count Report

Intersection:	Dundas St W & Neyagawa Blvd
Municipality:	Oakville
Count Date:	Tuesday, Mar 19, 2024
Site Code:	2409800001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Dundas St W & Neyagawa Blvd
Site Code:	2409800001
Municipality:	Oakville
Count Date:	Mar 19, 2024



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Dundas St W & Neyagawa Blvd
Site Code:	2409800001
Municipality:	Oakville
Count Date:	Mar 19, 2024

Neyagawa Blvd - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	50	153	257	0	460	17	152	176	36	1	365	3	825
08:00 - 09:00	76	235	353	1	665	2	223	269	74	5	571	7	1236
BREAK													
16:00 - 17:00	78	283	397	0	758	1	265	367	102	5	739	6	1497
17:00 - 18:00	98	282	400	0	780	7	222	403	84	7	716	4	1496
GRAND TOTAL	**302**	**953**	**1407**	**1**	**2663**	**27**	**862**	**1215**	**296**	**18**	**2391**	**20**	**5054**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Dundas St W & Neyagawa Blvd
Site Code:	2409800001
Municipality:	Oakville
Count Date:	Mar 19, 2024

Dundas St W - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	101	615	19	23	758	6	315	920	152	1	1388	2	2146
08:00 - 09:00	154	820	37	28	1039	6	302	1168	222	0	1692	2	2731
BREAK													
16:00 - 17:00	209	1396	63	28	1696	22	252	887	208	0	1347	3	3043
17:00 - 18:00	195	1183	48	29	1455	19	255	891	218	0	1364	3	2819
GRAND TOTAL	**659**	**4014**	**167**	**108**	**4948**	**53**	**1124**	**3866**	**800**	**1**	**5791**	**10**	**10739**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

North Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
					Total					Total					Total	
07:00	7	20	35	0	62	2	2	3	0	7	0	0	0	0	0	17
07:15	12	24	66	0	102	1	1	5	0	7	0	0	0	0	0	0
07:30	7	36	52	0	95	0	6	1	0	7	0	0	0	0	0	0
07:45	21	62	92	0	175	0	2	3	0	5	0	0	0	0	0	0
08:00	17	72	87	1	177	1	3	2	0	6	0	0	0	0	0	1
08:15	15	47	90	0	152	0	3	3	0	6	0	0	0	0	0	0
08:30	26	55	83	0	164	1	5	5	0	11	0	0	0	0	0	0
08:45	15	49	81	0	145	1	1	2	0	4	0	0	0	0	0	1
SUBTOTAL	120	365	586	1	1072	6	23	24	0	53	0	0	0	0	0	19

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

North Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	17	63	100	0	180	0	3	5	0	8	0	0	0	0	0	1
16:15	22	77	90	0	189	0	1	5	0	6	0	0	0	0	0	0
16:30	21	66	96	0	183	1	0	0	0	1	0	0	0	0	0	0
16:45	17	71	100	0	188	0	1	1	0	2	0	1	0	0	1	0
17:00	27	67	95	0	189	0	0	0	0	0	0	0	0	0	0	0
17:15	32	71	118	0	221	0	1	1	0	2	0	0	0	0	0	2
17:30	22	70	98	0	190	0	2	0	0	2	0	0	0	0	0	4
17:45	16	71	87	0	174	1	0	1	0	2	0	0	0	0	0	1
SUBTOTAL	174	556	784	0	1514	2	8	13	0	23	0	1	0	0	1	8
GRAND TOTAL	**294**	**921**	**1370**	**1**	**2586**	**8**	**31**	**37**	**0**	**76**	**0**	**1**	**0**	**0**	**1**	**27**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

South Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	27	27	7	1	62	0	0	0	0	0	0	0	0	0	0	0
07:15	32	43	10	0	85	1	4	0	0	5	0	0	0	0	0	0
07:30	38	40	9	0	87	1	2	0	0	3	0	0	0	0	0	2
07:45	53	58	8	0	119	0	2	2	0	4	0	0	0	0	0	1
08:00	44	64	14	2	124	3	1	0	0	4	0	0	0	0	0	4
08:15	43	81	18	1	143	3	2	0	0	5	0	0	0	0	0	1
08:30	48	68	25	1	142	3	2	0	0	5	0	0	0	0	0	1
08:45	76	46	17	1	140	3	5	0	0	8	0	0	0	0	0	1
SUBTOTAL	361	427	108	6	902	14	18	2	0	34	0	0	0	0	0	10

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

South Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	63	79	29	1	172	2	0	1	0	3	0	0	0	0	0	2
16:15	71	87	19	2	179	2	3	0	0	5	0	0	0	0	0	2
16:30	64	85	21	1	171	1	1	0	0	2	0	0	0	0	0	2
16:45	62	112	31	1	206	0	0	1	0	1	0	0	0	0	0	0
17:00	62	106	15	2	185	0	0	0	0	0	0	0	0	0	0	2
17:15	53	108	29	2	192	1	1	0	0	2	0	0	0	0	0	1
17:30	50	91	19	2	162	0	0	0	0	0	0	0	0	0	0	0
17:45	56	97	21	1	175	0	0	0	0	0	0	0	0	0	0	1
SUBTOTAL	481	765	184	12	1442	6	5	2	0	13	0	0	0	0	0	10
GRAND TOTAL	**842**	**1192**	**292**	**18**	**2344**	**20**	**23**	**4**	**0**	**47**	**0**	**0**	**0**	**0**	**0**	**20**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

East Approach - Dundas St W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	13	110	4	6	133	2	13	0	0	15	0	0	0	0	0	2
07:15	16	122	5	5	148	4	16	2	0	22	0	0	0	0	0	3
07:30	34	152	4	6	196	2	13	0	0	15	0	0	0	0	0	1
07:45	28	174	3	6	211	2	15	1	0	18	0	0	0	0	0	0
08:00	36	148	7	9	200	1	14	1	0	16	0	0	0	0	0	1
08:15	40	187	15	5	247	0	19	0	0	19	0	0	0	0	0	2
08:30	30	221	8	5	264	0	17	0	0	17	0	0	0	0	0	2
08:45	47	199	5	9	260	0	15	1	0	16	0	0	0	0	0	1
SUBTOTAL	244	1313	51	51	1659	11	122	5	0	138	0	0	0	0	0	12

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

East Approach - Dundas St W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	57	384	18	6	465	0	17	1	0	18	0	0	0	0	0	6
16:15	38	288	12	6	344	0	11	0	0	11	0	0	0	0	0	9
16:30	70	362	15	5	452	0	8	1	0	9	0	0	0	0	0	3
16:45	44	323	14	11	392	0	3	2	0	5	0	0	0	0	0	4
17:00	56	310	13	5	384	1	7	0	0	8	0	0	0	0	0	4
17:15	43	317	12	6	378	0	3	0	0	3	0	0	0	0	0	7
17:30	47	284	8	9	348	0	4	0	0	4	0	0	0	0	0	3
17:45	48	256	15	9	328	0	2	0	0	2	0	0	0	0	0	5
SUBTOTAL	403	2524	107	57	3091	1	55	4	0	60	0	0	0	0	0	41
GRAND TOTAL	647	3837	158	108	4750	12	177	9	0	198	0	0	0	0	0	53

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

West Approach - Dundas St W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	52	174	0	0	226	3	10	2	0	15	0	0	0	0	0	0
07:15	81	201	39	0	321	4	13	2	0	19	0	0	0	0	0	0
07:30	85	265	41	1	392	3	6	6	0	15	0	0	0	0	0	1
07:45	86	246	57	0	389	1	5	5	0	11	0	0	0	0	0	1
08:00	81	275	51	0	407	0	11	0	0	11	0	0	0	0	0	1
08:15	75	312	56	0	443	3	8	2	0	13	0	0	0	0	0	0
08:30	67	270	58	0	395	4	12	1	0	17	0	0	0	0	0	0
08:45	72	263	52	0	387	0	17	2	0	19	0	0	0	0	0	1
SUBTOTAL	599	2006	354	1	2960	18	82	20	0	120	0	0	0	0	0	4

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Municipality: Oakville
Count Date: Mar 19, 2024

West Approach - Dundas St W

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	56	225	47	0	328	3	4	1	0	8	0	0	0	0	0	1
16:15	54	210	53	0	317	1	14	1	0	16	0	0	0	0	0	0
16:30	67	224	52	0	343	0	7	0	0	7	0	0	0	0	0	0
16:45	69	196	54	0	319	2	7	0	0	9	0	0	0	0	0	2
17:00	55	200	46	0	301	3	4	1	0	8	0	0	0	0	0	1
17:15	55	219	58	0	332	1	14	1	0	16	0	0	0	0	0	0
17:30	68	246	57	0	371	0	6	0	0	6	0	0	0	0	0	0
17:45	71	197	55	0	323	2	5	0	0	7	0	0	0	0	0	2
SUBTOTAL	495	1717	422	0	2634	12	61	4	0	77	0	0	0	0	0	6
GRAND TOTAL	1094	3723	776	1	5594	30	143	24	0	197	0	0	0	0	0	10

Peak Hour Diagram

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Specified Period		One Hour Peak	
From:	07:00:00	From:	08:00:00
To:	09:00:00	To:	09:00:00

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Count Date: Mar 19, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Dundas St W runs E/W

North Approach

	Out	In	Total
Cars	638	590	1228
Trucks	27	19	46
Bicycles	0	0	0
	665	**609**	**1274**

Neyagawa Blvd

Bicycles	0	0	0	0
Trucks	12	12	3	0
Cars	341	223	73	1
Totals	**353**	**235**	**76**	**1**

East Approach

	Out	In	Total
Cars	971	1295	2266
Trucks	68	51	119
Bicycles	0	0	0
	1039	**1346**	**2385**

Peds: 2

Dundas St W

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	7	295	**302**	
0	48	1120	**1168**	
0	5	217	**222**	

Peds: 2



Peds: 6

Dundas St W

	Totals	Cars	Trucks	Bicycles
	28	28	0	0
	37	35	2	0
	820	755	65	0
	154	153	1	0

Peds: 7

West Approach

	Out	In	Total
Cars	1632	1307	2939
Trucks	60	89	149
Bicycles	0	0	0
	1692	**1396**	**3088**

Neyagawa Blvd

Totals	**223**	**269**	**74**	**5**
Cars	211	259	74	5
Trucks	12	10	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	549	598	1147
Trucks	22	18	40
Bicycles	0	0	0
	571	**616**	**1187**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Count Date: Mar 19, 2024
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Neyagawa Blvd						South Approach Neyagawa Blvd						East Approach Dundas St W						West Approach Dundas St W						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	18	75	89	1	1	183	47	65	14	2	4	128	37	162	8	9	1	216	81	286	51	0	1	418	945
08:15	15	50	93	0	0	158	46	83	18	1	1	148	40	206	15	5	2	266	78	320	58	0	0	456	1028
08:30	27	60	88	0	0	175	51	70	25	1	1	147	30	238	8	5	2	281	71	282	59	0	0	412	1015
08:45	16	50	83	0	1	149	79	51	17	1	1	148	47	214	6	9	1	276	72	280	54	0	1	406	979
Grand Total	**76**	**235**	**353**	**1**	**2**	**665**	**223**	**269**	**74**	**5**	**7**	**571**	**154**	**820**	**37**	**28**	**6**	**1039**	**302**	**1168**	**222**	**0**	**2**	**1692**	**3967**
Approach %	11.4	35.3	53.1	0.2		-	39.1	47.1	13	0.9		-	14.8	78.9	3.6	2.7		-	17.8	69	13.1	0		-	
Totals %	1.9	5.9	8.9	0		16.8	5.6	6.8	1.9	0.1		14.4	3.9	20.7	0.9	0.7		26.2	7.6	29.4	5.6	0		42.7	
PHF	**0.7**	**0.78**	**0.95**	**0.25**		**0.91**	**0.71**	**0.81**	**0.74**	**0.63**		**0.96**	**0.82**	**0.86**	**0.62**	**0.78**		**0.92**	**0.93**	**0.91**	**0.94**	**0**		**0.93**	**0.96**
Cars	73	223	341	1		638	211	259	74	5		549	153	755	35	28		971	295	1120	217	0		1632	3790
% Cars	96.1	94.9	96.6	100		95.9	94.6	96.3	100	100		96.1	99.4	92.1	94.6	100		93.5	97.7	95.9	97.7	0		96.5	95.5
Trucks	3	12	12	0		27	12	10	0	0		22	1	65	2	0		68	7	48	5	0		60	177
% Trucks	3.9	5.1	3.4	0		4.1	5.4	3.7	0	0		3.9	0.6	7.9	5.4	0		6.5	2.3	4.1	2.3	0		3.5	4.5
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					2	-					7	-					6	-					2	-	17
% Peds					11.8	-					41.2	-					35.3	-					11.8	-	

Peak Hour Diagram

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Specified Period		One Hour Peak	
From:	16:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Count Date: Mar 19, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Dundas St W runs E/W

North Approach

	Out	In	Total
Cars	740	668	1408
Trucks	17	14	31
Bicycles	1	0	1
	758	**682**	**1440**

Neyagawa Blvd

Bicycles	0	1	0	0
Trucks	11	5	1	0
Cars	386	277	77	0
Totals	**397**	**283**	**78**	**0**

East Approach

	Out	In	Total
Cars	1653	1060	2713
Trucks	43	35	78
Bicycles	0	0	0
	1696	**1095**	**2791**

Dundas St W

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	6	246	**252**	
0	32	855	**887**	
0	2	206	**208**	

Peds: 1
Peds: 3
Peds: 22
Peds: 6



Dundas St W

Totals	Cars	Trucks	Bicycles
28	28	0	0
63	59	4	0
1396	1357	39	0
209	209	0	0

West Approach

	Out	In	Total
Cars	1307	2003	3310
Trucks	40	55	95
Bicycles	0	0	0
	1347	**2058**	**3405**

Neyagawa Blvd

Totals	**265**	**367**	**102**	**5**
Cars	260	363	100	5
Trucks	5	4	2	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	728	697	1425
Trucks	11	7	18
Bicycles	0	1	1
	739	**705**	**1444**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Dundas St W & Neyagawa Blvd
Site Code: 2409800001
Count Date: Mar 19, 2024
Period: 16:00 - 18:00

Peak Hour Data (16:00 - 17:00)

Start Time	North Approach Neyagawa Blvd						South Approach Neyagawa Blvd						East Approach Dundas St W						West Approach Dundas St W						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	17	66	105	0	1	188	65	79	30	1	2	175	57	401	19	6	6	483	59	229	48	0	1	336	1182
16:15	22	78	95	0	0	195	73	90	19	2	2	184	38	299	12	6	9	355	55	224	54	0	0	333	1067
16:30	22	66	96	0	0	184	65	86	21	1	2	173	70	370	16	5	3	461	67	231	52	0	0	350	1168
16:45	17	73	101	0	0	191	62	112	32	1	0	207	44	326	16	11	4	397	71	203	54	0	2	328	1123
Grand Total	**78**	**283**	**397**	**0**	**1**	**758**	**265**	**367**	**102**	**5**	**6**	**739**	**209**	**1396**	**63**	**28**	**22**	**1696**	**252**	**887**	**208**	**0**	**3**	**1347**	**4540**
Approach %	10.3	37.3	52.4	0		-	35.9	49.7	13.8	0.7		-	12.3	82.3	3.7	1.7		-	18.7	65.9	15.4	0		-	
Totals %	1.7	6.2	8.7	0		16.7	5.8	8.1	2.2	0.1		16.3	4.6	30.7	1.4	0.6		37.4	5.6	19.5	4.6	0		29.7	
PHF	**0.89**	**0.91**	**0.95**	**0**		**0.97**	**0.91**	**0.82**	**0.8**	**0.63**		**0.89**	**0.75**	**0.87**	**0.83**	**0.64**		**0.88**	**0.89**	**0.96**	**0.96**	**0**		**0.96**	**0.96**
Cars	77	277	386	0		740	260	363	100	5		728	209	1357	59	28		1653	246	855	206	0		1307	4428
% Cars	98.7	97.9	97.2	0		97.6	98.1	98.9	98	100		98.5	100	97.2	93.7	100		97.5	97.6	96.4	99	0		97	97.5
Trucks	1	5	11	0		17	5	4	2	0		11	0	39	4	0		43	6	32	2	0		40	111
% Trucks	1.3	1.8	2.8	0		2.2	1.9	1.1	2	0		1.5	0	2.8	6.3	0		2.5	2.4	3.6	1	0		3	2.4
Bicycles	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	1
% Bicycles	0	0.4	0	0		0.1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					6	-					22	-					3	-	32
% Peds					3.1	-					18.8	-					68.8	-					9.4	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #24-098 - GHD

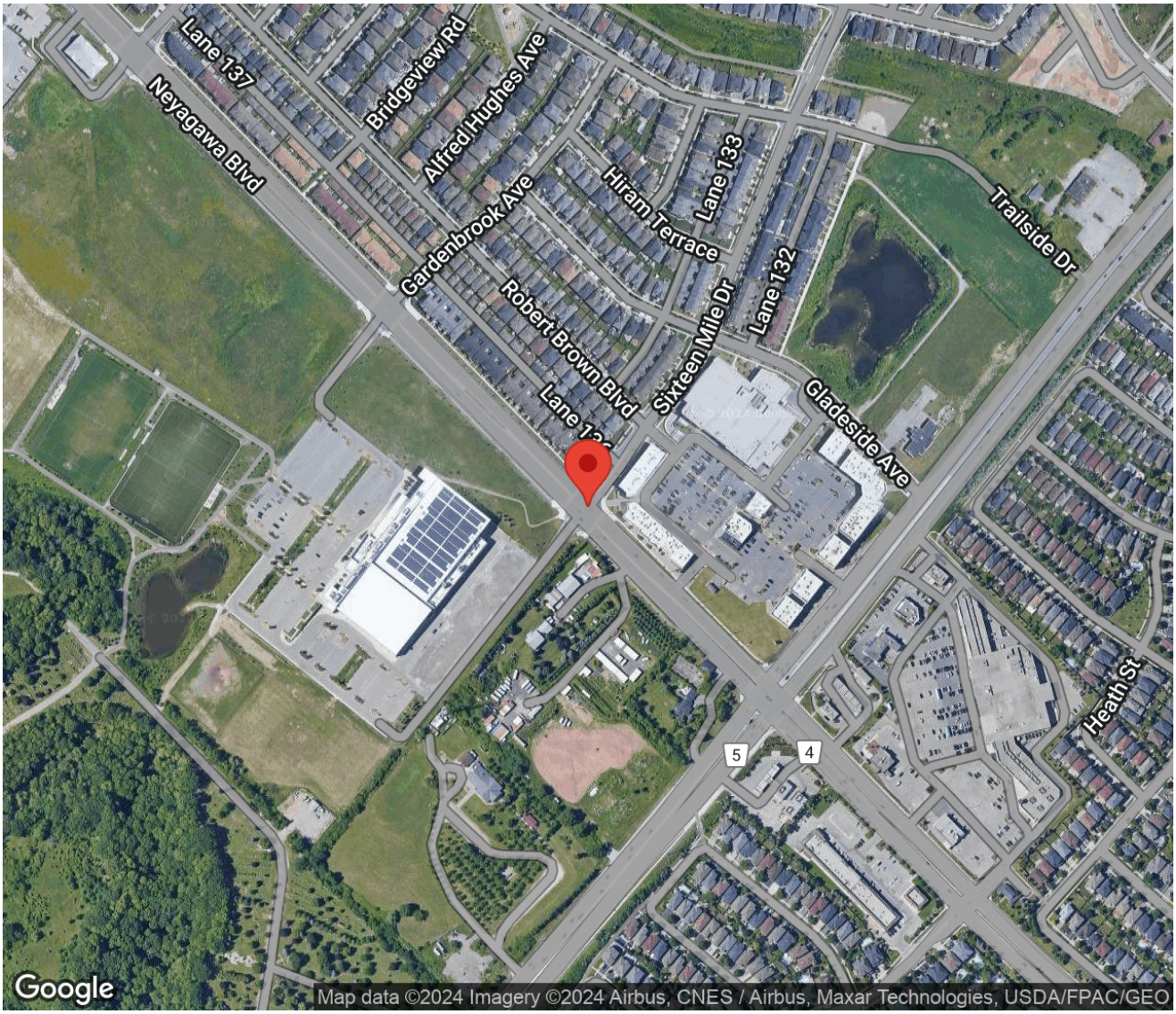
Intersection Count Report

Intersection:	Neyagawa Blvd & Sixteen Mile Dr
Municipality:	Oakville
Count Date:	Tuesday, Mar 19, 2024
Site Code:	2409800002
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Neyagawa Blvd & Sixteen Mile Dr
Site Code:	2409800002
Municipality:	Oakville
Count Date:	Mar 19, 2024



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Neyagawa Blvd & Sixteen Mile Dr
Site Code:	2409800002
Municipality:	Oakville
Count Date:	Mar 19, 2024

Neyagawa Blvd - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	7	362	3	0	372	0	19	445	35	1	500	0	872
08:00 - 09:00	27	537	2	0	566	1	16	480	73	3	572	1	1138
BREAK													
16:00 - 17:00	47	500	2	0	549	1	44	422	96	13	575	0	1124
17:00 - 18:00	51	531	2	0	584	0	33	483	102	11	629	1	1213
GRAND TOTAL	**132**	**1930**	**9**	**0**	**2071**	**2**	**112**	**1830**	**306**	**28**	**2276**	**2**	**4347**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Neyagawa Blvd & Sixteen Mile Dr
Site Code:	2409800002
Municipality:	Oakville
Count Date:	Mar 19, 2024

Sixteen Mile Dr - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	82	1	18	0	101	3	0	0	9	0	9	0	110
08:00 - 09:00	102	1	20	0	123	2	1	1	18	0	20	0	143
BREAK													
16:00 - 17:00	219	2	30	0	251	4	1	4	24	0	29	0	280
17:00 - 18:00	200	9	27	0	236	6	3	6	35	0	44	0	280
GRAND TOTAL	**603**	**13**	**95**	**0**	**711**	**15**	**5**	**11**	**86**	**0**	**102**	**0**	**813**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

North Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	1	46	1	0	48	0	4	0	0	4	0	0	0	0	0	0
07:15	1	81	1	0	83	0	5	0	0	5	0	0	0	0	0	0
07:30	1	82	0	0	83	1	4	0	0	5	0	0	0	0	0	0
07:45	3	139	1	0	143	0	1	0	0	1	0	0	0	0	0	0
08:00	3	131	0	0	134	1	5	0	0	6	0	0	0	0	0	0
08:15	10	126	1	0	137	0	5	0	0	5	0	0	0	0	0	1
08:30	3	139	1	0	143	2	7	0	0	9	0	0	0	0	0	0
08:45	8	122	0	0	130	0	2	0	0	2	0	0	0	0	0	0
SUBTOTAL	30	866	5	0	901	4	33	0	0	37	0	0	0	0	0	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

North Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	13	114	0	0	127	0	7	0	0	7	0	0	0	0	0	1
16:15	7	124	0	0	131	1	4	0	0	5	0	0	0	0	0	0
16:30	8	128	0	0	136	0	1	0	0	1	0	0	0	0	0	0
16:45	18	120	2	0	140	0	1	0	0	1	0	1	0	0	1	0
17:00	11	113	0	0	124	0	0	0	0	0	0	0	0	0	0	0
17:15	17	161	0	0	178	1	0	0	0	1	0	0	0	0	0	0
17:30	10	133	0	0	143	0	1	0	0	1	0	0	0	0	0	0
17:45	12	122	2	0	136	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	96	1015	4	0	1115	2	15	0	0	17	0	1	0	0	1	1
GRAND TOTAL	**126**	**1881**	**9**	**0**	**2016**	**6**	**48**	**0**	**0**	**54**	**0**	**1**	**0**	**0**	**1**	**2**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

South Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	8	74	6	0	88	0	2	0	1	3	0	0	0	0	0	0
07:15	5	104	7	0	116	1	7	1	0	9	0	0	0	0	0	0
07:30	2	123	7	0	132	0	5	2	0	7	0	0	0	0	0	0
07:45	3	127	11	0	141	0	3	1	0	4	0	0	0	0	0	0
08:00	7	133	11	1	152	0	3	1	0	4	0	0	0	0	0	1
08:15	2	125	31	2	160	1	4	1	0	6	0	0	0	0	0	0
08:30	3	119	11	0	133	0	4	0	0	4	0	0	0	0	0	0
08:45	3	88	16	0	107	0	4	2	0	6	0	0	0	0	0	0
SUBTOTAL	33	893	100	3	1029	2	32	8	1	43	0	0	0	0	0	1

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

South Approach - Neyagawa Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	↰	↑	↱	↷	Total	
16:00	10	87	21	4	122	0	4	0	0	4	0	0	0	0	0	0
16:15	11	93	29	3	136	0	2	1	0	3	0	0	0	0	0	0
16:30	12	102	20	4	138	0	1	0	0	1	0	0	0	0	0	0
16:45	11	130	24	2	167	0	3	1	0	4	0	0	0	0	0	0
17:00	12	116	19	3	150	0	3	1	0	4	0	0	0	0	0	0
17:15	4	131	18	4	157	0	0	1	0	1	0	0	0	0	0	1
17:30	2	111	31	2	146	0	0	1	0	1	0	0	0	0	0	0
17:45	15	121	31	2	169	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	77	891	193	24	1185	0	14	5	0	19	0	0	0	0	0	1
GRAND TOTAL	110	1784	293	27	2214	2	46	13	1	62	0	0	0	0	0	2

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

East Approach - Sixteen Mile Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	14	1	3	0	18	1	0	1	0	2	0	0	0	0	0	0
07:15	20	0	3	0	23	2	0	0	0	2	0	0	0	0	0	1
07:30	11	0	4	0	15	2	0	0	0	2	0	0	0	0	0	0
07:45	28	0	7	0	35	4	0	0	0	4	0	0	0	0	0	2
08:00	32	0	5	0	37	1	0	0	0	1	0	0	0	0	0	0
08:15	20	0	6	0	26	1	1	0	0	2	0	0	0	0	0	0
08:30	24	0	4	0	28	4	0	0	0	4	0	0	0	0	0	1
08:45	19	0	4	0	23	1	0	1	0	2	0	0	0	0	0	1
SUBTOTAL	168	1	36	0	205	16	1	2	0	19	0	0	0	0	0	5

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

East Approach - Sixteen Mile Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	60	1	8	0	69	1	0	0	0	1	0	0	0	0	0	1
16:15	48	1	9	0	58	2	0	1	0	3	0	0	0	0	0	2
16:30	50	0	5	0	55	0	0	1	0	1	0	0	0	0	0	1
16:45	57	0	6	0	63	1	0	0	0	1	0	0	0	0	0	0
17:00	60	3	7	0	70	0	0	0	0	0	0	0	0	0	0	1
17:15	38	2	10	0	50	2	0	0	0	2	0	0	0	0	0	4
17:30	52	0	6	0	58	1	0	0	0	1	0	0	0	0	0	1
17:45	46	4	4	0	54	1	0	0	0	1	0	0	0	0	0	0
SUBTOTAL	411	11	55	0	477	8	0	2	0	10	0	0	0	0	0	10
GRAND TOTAL	**579**	**12**	**91**	**0**	**682**	**24**	**1**	**4**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**15**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

West Approach - Commerical Entrance

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
07:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
07:45	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
08:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45	0	1	6	0	7	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	1	1	25	0	27	0	0	2	0	2	0	0	0	0	0	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Municipality: Oakville
Count Date: Mar 19, 2024

West Approach - Commerical Entrance

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
16:00	0	1	5	0	6	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0
16:30	0	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0
16:45	1	0	6	0	7	0	0	0	0	0	0	0	0	0	0	0
17:00	1	1	11	0	13	0	0	0	0	0	0	0	0	0	0	0
17:15	2	1	14	0	17	0	0	0	0	0	0	0	0	0	0	0
17:30	0	2	4	0	6	0	0	0	0	0	0	0	0	0	0	0
17:45	0	2	6	0	8	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	4	10	59	0	73	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	5	11	84	0	100	0	0	2	0	2	0	0	0	0	0	0

Peak Hour Diagram

Specified Period
From: 07:00:00
To: 09:00:00

One Hour Peak
From: 07:45:00
To: 08:45:00

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Count Date: Mar 19, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Neyagawa Blvd runs N/S

North Approach

	Out	In	Total
Cars	557	527	1084
Trucks	21	14	35
Bicycles	0	0	0
	578	**541**	**1119**

Neyagawa Blvd

Bicycles	0	0	0	0
Trucks	0	18	3	0
Cars	3	535	19	0
Totals	**3**	**553**	**22**	**0**

Peds: 1

East Approach

	Out	In	Total
Cars	126	83	209
Trucks	11	6	17
Bicycles	0	0	0
	137	**89**	**226**

Commerical Entrance

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	0	1	**1**
0	0	0	**0**
0	0	18	**18**

Peds: 0

N / W / E / S

Peds: 3

Sixteen Mile Dr

Totals	Cars	Trucks	Bicycles
0	0	0	0
22	22	0	0
1	0	1	0
114	104	10	0

Peds: 1

West Approach

	Out	In	Total
Cars	19	18	37
Trucks	0	2	2
Bicycles	0	0	0
	19	**20**	**39**

Neyagawa Blvd

Totals	**16**	**518**	**67**	**3**
Cars	15	504	64	3
Trucks	1	14	3	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	586	660	1246
Trucks	18	28	46
Bicycles	0	0	0
	604	**688**	**1292**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Count Date: Mar 19, 2024
Period: 07:00 - 09:00

Peak Hour Data (07:45 - 08:45)

Start Time	North Approach Neyagawa Blvd						South Approach Neyagawa Blvd						East Approach Sixteen Mile Dr						West Approach Commerical Entrance						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
07:45	3	140	1	0	0	144	3	130	12	0	0	145	32	0	7	0	2	39	0	0	6	0	0	6	334
08:00	4	136	0	0	0	140	7	136	12	1	1	156	33	0	5	0	0	38	0	0	9	0	0	9	343
08:15	10	131	1	0	1	142	3	129	32	2	0	166	21	1	6	0	0	28	0	0	3	0	0	3	339
08:30	5	146	1	0	0	152	3	123	11	0	0	137	28	0	4	0	1	32	1	0	0	0	0	1	322
Grand Total	**22**	**553**	**3**	**0**	**1**	**578**	**16**	**518**	**67**	**3**	**1**	**604**	**114**	**1**	**22**	**0**	**3**	**137**	**1**	**0**	**18**	**0**	**0**	**19**	**1338**
Approach %	3.8	95.7	0.5	0		-	2.6	85.8	11.1	0.5		-	83.2	0.7	16.1	0		-	5.3	0	94.7	0		-	
Totals %	1.6	41.3	0.2	0		43.2	1.2	38.7	5	0.2		45.1	8.5	0.1	1.6	0		10.2	0.1	0	1.3	0		1.4	
PHF	**0.55**	**0.95**	**0.75**	**0**		**0.95**	**0.57**	**0.95**	**0.52**	**0.38**		**0.91**	**0.86**	**0.25**	**0.79**	**0**		**0.88**	**0.25**	**0**	**0.5**	**0**		**0.53**	**0.98**
Cars	19	535	3	0		557	15	504	64	3		586	104	0	22	0		126	1	0	18	0		19	1288
% Cars	86.4	96.7	100	0		96.4	93.8	97.3	95.5	100		97	91.2	0	100	0		92	100	0	100	0		100	96.3
Trucks	3	18	0	0		21	1	14	3	0		18	10	1	0	0		11	0	0	0	0		0	50
% Trucks	13.6	3.3	0	0		3.6	6.3	2.7	4.5	0		3	8.8	100	0	0		8	0	0	0	0		0	3.7
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					1	-					1	-					3	-					0	-	5
% Peds					20	-					20	-					60	-					0	-	

Peak Hour Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Count Date: Mar 19, 2024

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Neyagawa Blvd runs N/S

North Approach

	Out	In	Total
Cars	585	521	1106
Trucks	3	6	9
Bicycles	1	0	1
	589	**527**	**1116**

Neyagawa Blvd

Bicycles	0	1	0	0
Trucks	0	2	1	0
Cars	2	527	56	0
Totals	**2**	**530**	**57**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	241	152	393
Trucks	4	5	9
Bicycles	0	0	0
	245	**157**	**402**

Commerical Entrance

Bicycles	Trucks	Cars	Totals
0	0	0	**0**
0	0	4	**4**
0	0	4	**4**
0	0	35	**35**

Peds: 0

Peds: 6

Sixteen Mile Dr

Totals	Cars	Trucks	Bicycles
0	0	0	0
29	29	0	0
5	5	0	0
211	207	4	0

Peds: 1

West Approach

	Out	In	Total
Cars	43	36	79
Trucks	0	0	0
Bicycles	0	0	0
	43	**36**	**79**

Neyagawa Blvd

Totals	**29**	**494**	**96**	**11**
Cars	29	488	92	11
Trucks	0	6	4	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	620	780	1400
Trucks	10	6	16
Bicycles	0	1	1
	630	**787**	**1417**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Neyagawa Blvd & Sixteen Mile Dr
Site Code: 2409800002
Count Date: Mar 19, 2024
Period: 16:00 - 18:00

Peak Hour Data (16:45 - 17:45)

Start Time	North Approach Neyagawa Blvd						South Approach Neyagawa Blvd						East Approach Sixteen Mile Dr						West Approach Commerical Entrance						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:45	18	122	2	0	0	142	11	133	25	2	0	171	58	0	6	0	0	64	1	0	6	0	0	7	384
17:00	11	113	0	0	0	124	12	119	20	3	0	154	60	3	7	0	1	70	1	1	11	0	0	13	361
17:15	18	161	0	0	0	179	4	131	19	4	1	158	40	2	10	0	4	52	2	1	14	0	0	17	406
17:30	10	134	0	0	0	144	2	111	32	2	0	147	53	0	6	0	1	59	0	2	4	0	0	6	356
Grand Total	**57**	**530**	**2**	**0**	**0**	**589**	**29**	**494**	**96**	**11**	**1**	**630**	**211**	**5**	**29**	**0**	**6**	**245**	**4**	**4**	**35**	**0**	**0**	**43**	**1507**
Approach %	9.7	90	0.3	0		-	4.6	78.4	15.2	1.7		-	86.1	2	11.8	0		-	9.3	9.3	81.4	0		-	
Totals %	3.8	35.2	0.1	0		39.1	1.9	32.8	6.4	0.7		41.8	14	0.3	1.9	0		16.3	0.3	0.3	2.3	0		2.9	
PHF	**0.79**	**0.82**	**0.25**	**0**		**0.82**	**0.6**	**0.93**	**0.75**	**0.69**		**0.92**	**0.88**	**0.42**	**0.73**	**0**		**0.88**	**0.5**	**0.5**	**0.63**	**0**		**0.63**	**0.93**
Cars	56	527	2	0		585	29	488	92	11		620	207	5	29	0		241	4	4	35	0		43	1489
% Cars	98.2	99.4	100	0		99.3	100	98.8	95.8	100		98.4	98.1	100	100	0		98.4	100	100	100	0		100	98.8
Trucks	1	2	0	0		3	0	6	4	0		10	4	0	0	0		4	0	0	0	0		0	17
% Trucks	1.8	0.4	0	0		0.5	0	1.2	4.2	0		1.6	1.9	0	0	0		1.6	0	0	0	0		0	1.1
Bicycles	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	1
% Bicycles	0	0.2	0	0		0.2	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0.1
Peds					0	-					1	-					6	-					0	-	7
% Peds					0	-					14.3	-					85.7	-					0	-	

Date: 21-Nov-24
Intersection: Dundas & Neyagawa

8 Phase Basic Timing Sheet												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**2 Ped**	**4 Ped**	**6 Ped**	**8 Ped**
Phases in use	X	X	X	X	X	X	X	X	X	X	X	X
Direction	WBL	EB	NBL	SB	EBL	WB	SBL	NB				
Min Green	7	20	7	10	7	20	7	10				
Veh Ext.	3.0		3.0	3.0	3.0		3.0	3.0				
Yellow	3	4.2	3	3.7	3	4.2	3	3.7				
Red	1	2.5	1	3.2	1	2.5	1	3.2				
Walk		7		7		7		7				
Don't Walk		36		40		36		40				
Max 1												
Max 2												
Max 3												
Veh Recall												
Ped Recall												
Notes:	Check Sync Reference Point											

Pattern 1 SSMTWTF
Time: 6:00-15:00
Cycle Length: 140
Offset (%): 97%

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%	12	40	9	39
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	*5*	*6*	*7*	*8*
%	15	37	8	40

Pattern 2 N/A
Time:
Cycle Length:
Offset (%):

Direction				
Phase	*1*	*2*	*3*	*4*
%				
Direction				
Phase	*5*	*6*	*7*	*8*
%				

Pattern 3 SSMTWTF
Time: 15:00-21:00
Cycle Length: 140
Offset (%): 1%

Direction	WBL	EB	NBL	SB
Phase	*1*	*2*	*3*	*4*
%	12	37	12	39
Direction	**EBL**	**WB**	**SBL**	**NB**
Phase	*5*	*6*	*7*	*8*
%	12	37	8	43

Pattern 4 N/A
Time:
Cycle Length:
Offset (%):

Direction				
Phase	*1*	*2*	*3*	*4*
%				
Direction				
Phase	*5*	*6*	*7*	*8*
%				

Pattern 5 SSMTWTF
Time: 21:00-06:00
Cycle Length: Local
Offset (%):

Direction				
Phase	*1*	*2*	*3*	*4*
%				
Direction				
Phase	5	6	7	8
%				

Pattern 6
Time:
Cycle Length:
Offset (%):

Direction				
Phase	*1*	*2*	*3*	*4*
%				
Direction				
Phase	5	6	7	8
%				

Date: 21-Nov-24
Intersection: Neyagawa & Sixteen Mile

8 Phase Basic Timing Sheet												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**2 Ped**	**4 Ped**	**6 Ped**	**8 Ped**
Phases in use		X		X	X	X		X	X	X	X	X
Direction		NB		EB	NBL	SB		WB				
Min Green		20		10	7	20		10				
Veh Ext.				3.0	3.0			3.0				
Yellow		3.7		3.3	3	3.7		3.3				
Red		2.6		3.5	1	2.6		3.5				
Walk		7		7		7		7				
Don't Walk		17		25		17		25				
Max 1												
Max 2												
Max 3												
Veh Recall												
Ped Recall												
Notes:	Check Sync Reference Point											

Pattern 1 SSMTWTF
Time: 6:00-21:00
Cycle Length: 90
Offset (%): 3%

Direction	**SBL**	**NB**		**EB**
Phase	***1***	***2***	***3***	***4***
%	13	41		46
Direction	**NBL**	**SB**		**WB**
Phase	***5***	***6***	***7***	***8***
%	13	41		46

Pattern 2 N/A
Time:
Cycle Length:
Offset (%):

Direction				
Phase	***1***	***2***	***3***	***4***
%				
Direction				
Phase	***5***	***6***	***7***	***8***
%				

Pattern 3 N/A
Time:
Cycle Length:
Offset (%):

Direction				
Phase	***1***	***2***	***3***	***4***
%				
Direction				
Phase	***5***	***6***	***7***	***8***
%				

Pattern 4 N/A
Time:
Cycle Length:
Offset (%):

Direction				
Phase	***1***	***2***	***3***	***4***
%				
Direction				
Phase	***5***	***6***	***7***	***8***
%				

Pattern 5 SSMTWTF
Time: 21:00-06:00
Cycle Length: Local
Offset (%):

Direction				
Phase	***1***	***2***	***3***	***4***
%				
Direction				
Phase	**5**	**6**	**7**	**8**
%				

Pattern 6
Time:
Cycle Length:
Offset (%):

Direction				
Phase	***1***	***2***	***3***	***4***
%				
Direction				
Phase	**5**	**6**	**7**	**8**
%				

Appendix D

Background Development Excerpts

Table 2 Site Trip Distribution

Trip Orientation	Period	
	AM	PM
North on Neyagawa Blvd.	14%	18%
South on Neyagawa Blvd.	18%	14%
East on Dundas St.	46%	46%
West on Dundas St.	9%	9%
North on Towne Blvd./George Savage Ave.	6%	7%
South on Towne Blvd./George Savage Ave.	7%	6%
Total	100%	100%

The estimated total site trips generated by the proposed development, as assigned to the nearby road network for the weekday AM and PM peak hours, is shown in **Figure 6**. These intersection volumes are a sum of the primary site trips for each component of the site, as well as the pass-by trips from the commercial component of the site, all of which are provided in **Appendix D**.

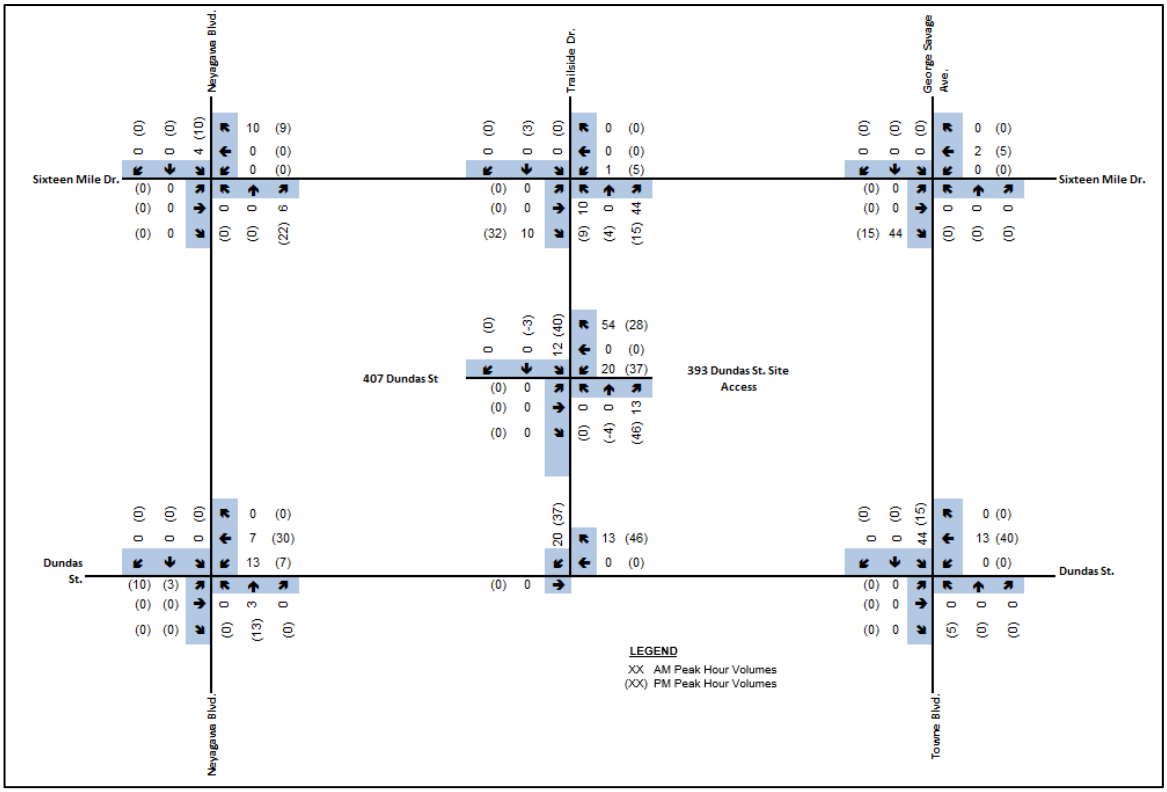


Figure 6 Estimated Site Trips

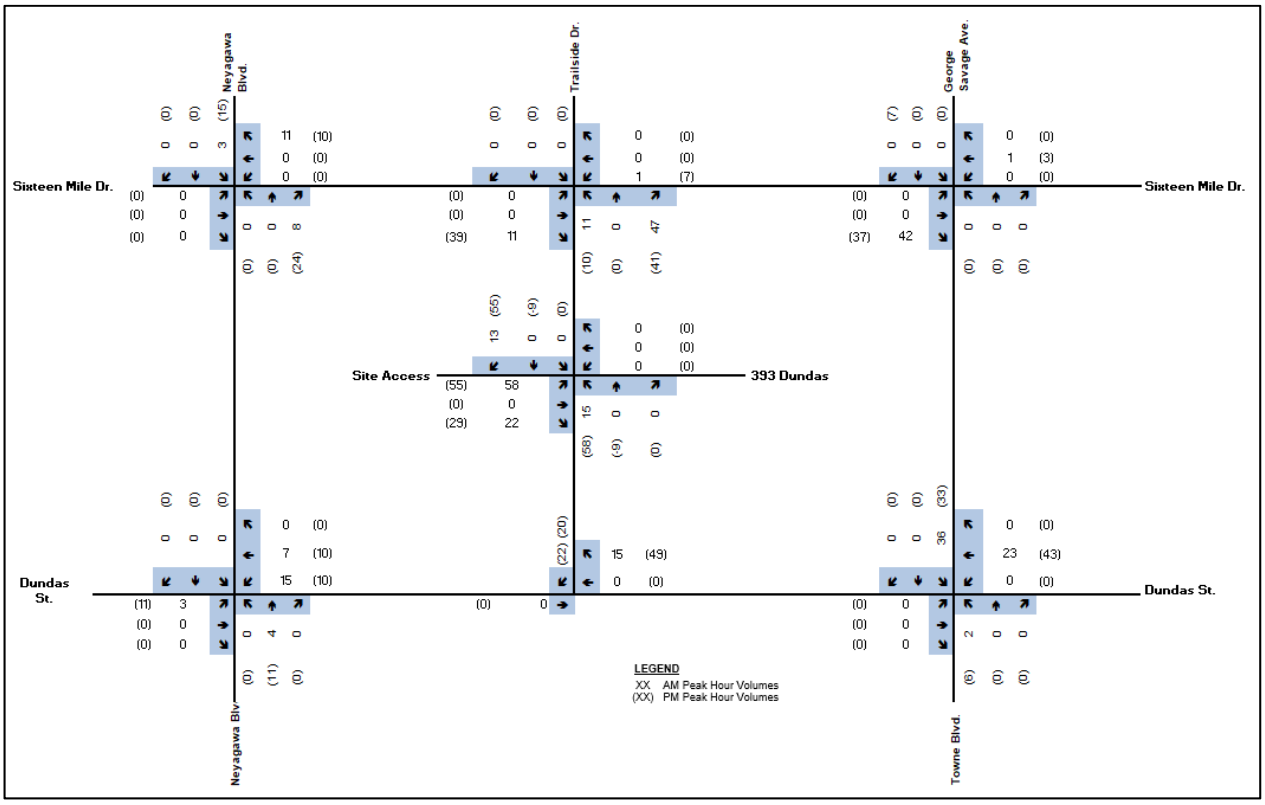
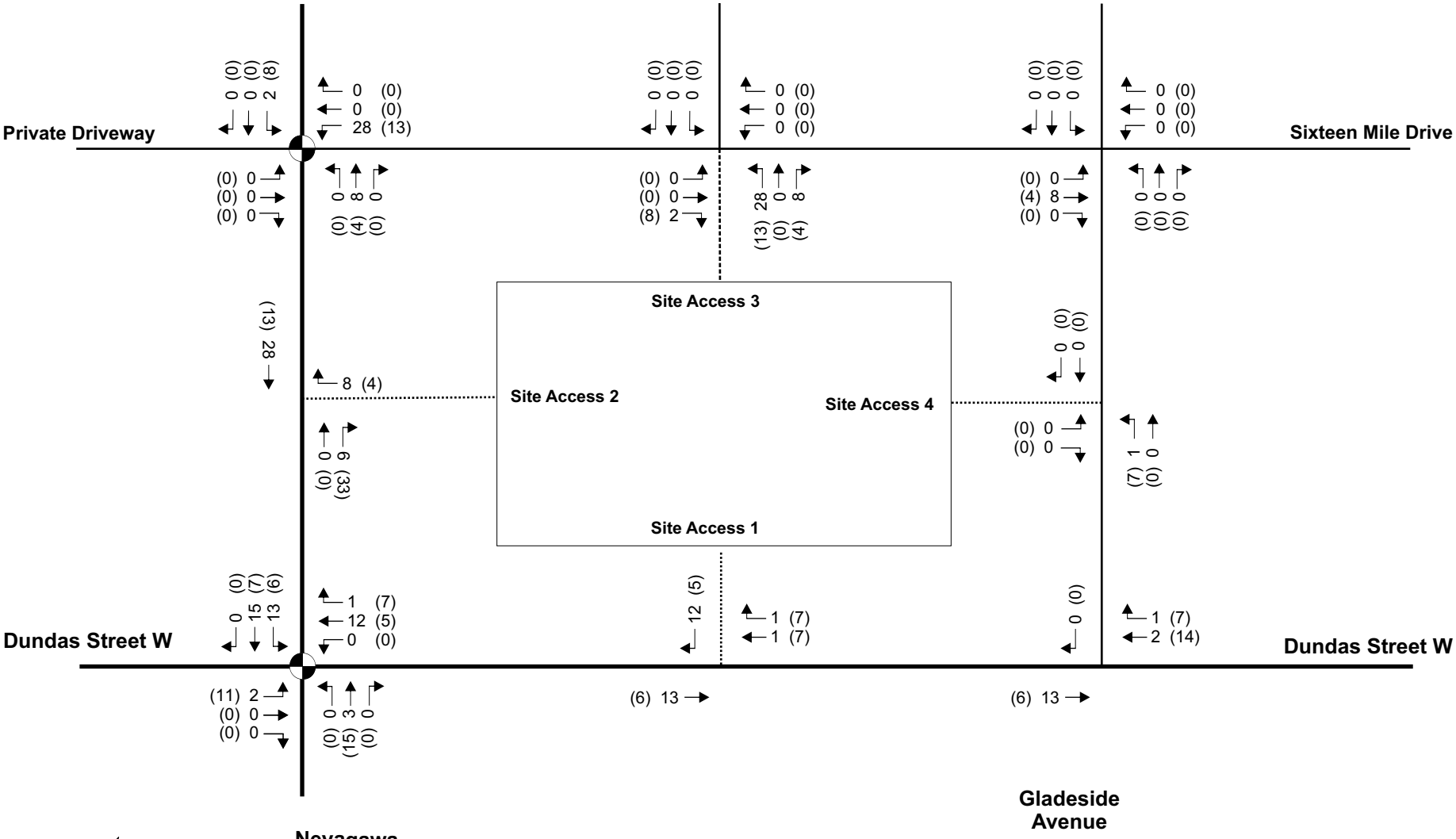


Figure 6: Site Generated Trips

6. Future Total Traffic

The future total traffic conditions for the peak study hours was derived by combining the projected future background traffic with the corresponding estimate of the total site generated traffic.

Figure 7 and **Figure 8** summarize the future total traffic volumes at the 2021 and 2026 planning horizons, respectively, during the weekday a.m. and p.m. peak hours.



Legend

99	AM Peak Hour Volume
(99)	PM Peak Hour Volume

Figure 5-1
Site Traffic

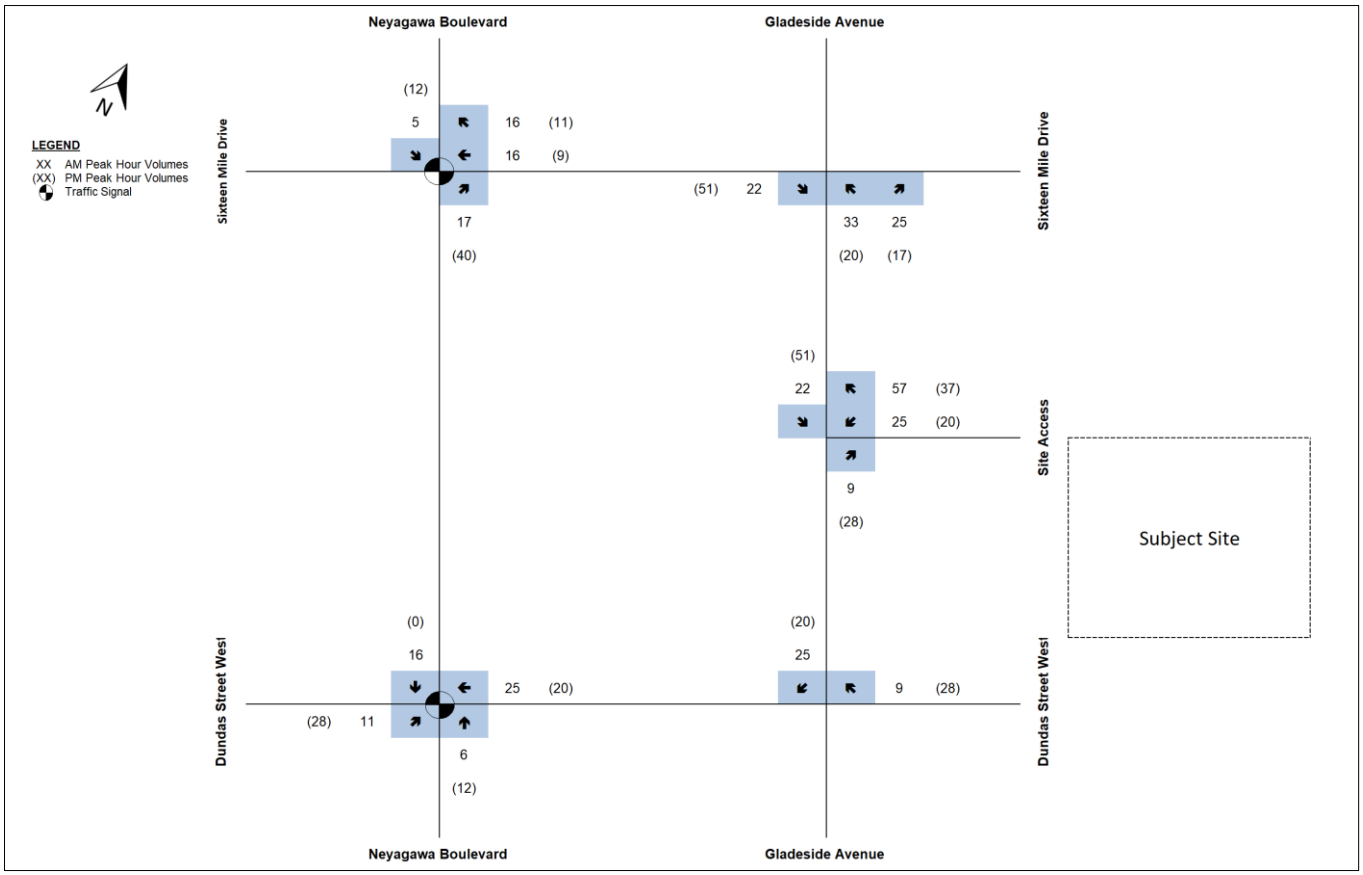


Figure 8 Full Build-out Total Site Trips - 2027

6. Future Total Traffic

The future total traffic conditions in the weekday a.m. and p.m. peak hours for the 2027 planning horizon was derived by combining the projected future background traffic with the corresponding estimated site generated traffic. The resulting traffic volumes are presented in **Figure 9**.

Appendix E

Transportation Tomorrow Survey 2016

AM Inbound
Thu Jun 27 2024 12:16:00 GMT-0400 (Eastern Daylight Time) - Run Time: 2515ms

Cross Tabulation Query Form - Trip - 2016

Row: Primary travel mode of trip - mode_prime
Column: 2006 GTA zone of destination - gta06_dest

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 600-900
and
Trip purpose of destination - purp_dest In H,

Trip 2016
Table:

,1		
Cycle	38	2%
Auto driver	1600	84%
Auto passenger	46	2%
Walk	214	11%
Sum	**1898**	

Auto Driver	84%
Auto Passenger	2%
Transit	0%
Active Transportation	13%
Total	**100%**
Transit + AT	13%
5% reduction	8%
However low sample size	0%

AM Outbound
Thu Jun 27 2024 12:17:01 GMT-0400 (Eastern Daylight Time) - Run Time: 2757ms

Cross Tabulation Query Form - Trip - 2016

Row: Primary travel mode of trip - mode_prime
Column: 2006 GTA zone of origin - gta06_orig

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 600-900
and
Trip purpose of origin - purp_orig In H,

Trip 2016
Table:

,1		
Transit excluding GO	531	3%
Cycle	175	1%
Auto driver	12186	61%
GO rail only	1058	5%
Joint GO rail and loca	503	3%
Auto passenger	3088	16%
School bus		0%
Walk	2303	12%
Sum	**19844**	

Auto Driver	61%
Auto Passenger	16%
Transit	11%
Active Transportati	12%
Total	**100%**
Transit + AT	23%
5% reduction	18%

PM Inbound
Thu Jun 27 2024 12:16:19 GMT-0400 (Eastern Daylight Time) - Run Time: 2571ms

Cross Tabulation Query Form - Trip - 2016

Row: Primary travel mode of trip - mode_prime
Column: 2006 GTA zone of destination - gta06_dest

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 1600-1900
and
Trip purpose of destination - purp_dest In H,

Trip 2016
Table:

,1		
Transit excludin	430	3%
Cycle	184	1%
Auto driver	11189	73%
GO rail only	1000	7%
Joint GO rail and	524	3%
Auto passenger	1718	11%
School bus		0%
Walk	274	2%
Sum	**15319**	

Auto Driver	73%
Auto Passenge	11%
Transit	13%
Active Transpo	3%
Total	**100%**
Transit + AT	16%
5% reduction	11%

PM Outbound
Thu Jun 27 2024 12:16:51 GMT-0400 (Eastern Daylight Time) - Run Time: 2450ms

Cross Tabulation Query Form - Trip - 2016

Row: Primary travel mode of trip - mode_prime
Column: 2006 GTA zone of origin - gta06_orig

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 1600-1900
and
Trip purpose of origin - purp_orig In H,

Trip 2016
Table:

,1		
Transit excludi	100	2%
Cycle	124	3%
Auto driver	2847	62%
GO rail only	68	1%
Joint GO rail a	79	2%
Other		0%
Auto passenge	1390	30%
Paid rideshare		0%
Walk	10	0%
Sum	**4618**	

Auto Driver	62%
Auto Passeng	30%
Transit	5%
Active Transp	3%
Total	**100%**
Transit + AT	8%
5% reduction	3%

Auto Drive	84%	61%	73%	62%
Auto Passe	2%	16%	11%	30%
Transit	0%	11%	13%	5%
Active Tran	13%	12%	3%	3%
Total	100%	100%	100%	100%
Transit + A	13%	23%	16%	8%
5% reducti	8%	18%	11%	3%

AM Inbound
Thu Jun 27 2024 12:12:57 GMT-0400 (Eastern Daylight Time) - Run Time: 2451ms

Cross Tabulation Query Form - Trip - 2016

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 600-900
and
Trip purpose of destination - purp_dest In H,

Trip 2016
Table:

,1
Brampton,18
Mississauga,44
Milton,12
Oakville,1747
Burlington,59
Cambridge,16

AM Outbound
Thu Jun 27 2024 12:14:17 GMT-0400 (Eastern Daylight Time) - Run Time: 2638ms

Cross Tabulation Query Form - Trip - 2016

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 600-900
and
Trip purpose of origin - purp_orig In H,

Trip 2016
Table:

,1	N	S	E	W	N Trips	S Trips	E Trips	W Trips
PD 1 of Torc	1957	0.25	0.75		489.25	1467.75	0	0
PD 2 of Torc	161	0.25	0.75		40.25	120.75	0	0
PD 3 of Torc	31	0.25	0.75		7.75	23.25	0	0
PD 4 of Torc	103	0.25	0.75		25.75	77.25	0	0
PD 5 of Torc	16	0.25	0.75		4	12	0	0
PD 6 of Torc	12	0.25	0.75		3	9	0	0
PD 7 of Torc	29	0.25	0.75		7.25	21.75	0	0
PD 8 of Torc	192	0.25	0.75		48	144	0	0
PD 9 of Torc	188	1			188	0	0	0
PD 10 of To	131	1			131	0	0	0
PD 11 of To	61	1			61	0	0	0
PD 12 of To	38	1			38	0	0	0
PD 13 of To	52	0.25	0.75		13	39	0	0
PD 15 of To	17	1			17	0	0	0
PD 16 of To	19	1			19	0	0	0
Pickering	27	1			27	0	0	0
Richmond H	113	1			113	0	0	0
Whitchurch-	46	1			46	0	0	0
Markham	60	1			60	0	0	0
Vaughan	118	1			118	0	0	0
Caledon	37	1			37	0	0	0
Brampton	470	1			470	0	0	0
Mississauga	3620	0.333333	0.333333	0.333333	1206.667	1206.667	1206.667	0
Halton Hills	63	0.5		0.5	31.5	0	31.5	0
Milton	261				1	0	0	0	261
Oakville	11116	0.15	0.15	0.35	0.35	1667.4	1667.4	3890.6	3890.6
Burlington	795				1	0	0	0	795
Dundas	21				1	0	0	0	21
Ancaster	35				1	0	0	0	35
Glanbrook	15				1	0	0	0	15
Stoney Cree	36				1	0	0	0	36
Hamilton	504				1	0	0	0	504
Niagara Fall	29				1	0	0	0	29
Waterloo	48	0.5			0.5	24	0	0	24
Cambridge	32	0.333333		0.333333	0.333333	10.66667	0	10.66667	10.66667
City of Guelp	77	0.333333		0.333333	0.333333	25.66667	0	25.66667	25.66667
Brantford	36				1	0	0	0	36
Sum	**20566**					**4929.15**	**4788.8167**	**5165.1**	**5682.9333**
						24%	23%	25%	28%

PM Inbound
Thu Jun 27 2024 12:13:38 GMT-0400 (Eastern Daylight Time) - Run Time: 2905ms

Cross Tabulation Query Form - Trip - 2016

Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 1600-1900
and
Trip purpose of destination - purp_dest In H,

Trip 2016
Table:

,1	N	S	E	W	N Trips	S Trips	E Trips	W Trips
PD 1 of Torc	1813	0.25	0.75		453.25	1359.75	0	0
PD 2 of Torc	116	0.25	0.75		29	87	0	0
PD 3 of Torc	22	0.25	0.75		5.5	16.5	0	0
PD 4 of Torc	89	0.25	0.75		22.25	66.75	0	0
PD 6 of Torc	43	0.25	0.75		10.75	32.25	0	0
PD 7 of Torc	20	0.25	0.75		5	15	0	0
PD 8 of Torc	221	0.25	0.75		55.25	165.75	0	0
PD 9 of Torc	129	1			129	0	0	0
PD 10 of To	148	1			148	0	0	0
PD 11 of To	80	1			80	0	0	0
PD 12 of To	21	1			21	0	0	0
PD 13 of To	103	0.25	0.75		25.75	77.25	0	0
PD 15 of To	17	1			17	0	0	0
Pickering	27	1			27	0	0	0
Richmond H	56	1			56	0	0	0
Whitchurch-	46	1			46	0	0	0
Markham	26	1			26	0	0	0
Vaughan	133	1			133	0	0	0
Caledon	37	1			37	0	0	0
Brampton	448	1			448	0	0	0
Mississauga	3215	0.333333	0.333333	0.333333	1071.667	1071.667	1071.667	0
Halton Hills	111	1			111	0	0	0
Milton	298	1			298	0	0	0
Oakville	6718	0.2	0.15	0.35	0.3	1343.6	1007.7	2351.3	2015.4
Burlington	697	0.2	0.4		0.4	139.4	278.8	0	278.8
Flamboroug	17	1			17	0	0	0
Ancaster	35	0.5			0.5	17.5	0	0	17.5
Glanbrook	32	0.5			0.5	16	0	0	16
Hamilton	405	0.5			0.5	202.5	0	0	202.5
Niagara Fall	29	1			29	0	0	0
Waterloo	19	1			19	0	0	0
Cambridge	32	1			32	0	0	0
City of Guelp	85	1			85	0	0	0
Oxford	37	1			37	0	0	0
Brantford	36	0.5			0.5	18	0	0	18
Sum	**15361**					**5211.4167**	**4178.4167**	**3422.9667**	**2548.2**
						34%	27%	22%	17%

PM Outbound
Thu Jun 27 2024 12:14:07 GMT-0400 (Eastern Da

Cross Tabulation Query Form - Trip - 2016

Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig

RowG:
ColG:(4035,4037,4039,4186)
TblG:

Filters:
Start time of trip - start_time In 1600-1900
and
Trip purpose of origin - purp_orig In H,

Trip 2016
Table:

,1
PD 1 of Toronto,158
PD 4 of Toronto,44
PD 6 of Toronto,17
PD 8 of Toronto,40
Oshawa,9
Brampton,89
Mississauga,411
Milton,46
Oakville,3216
Burlington,367
Flamborough,22
Hamilton,24
Niagara-on-the-Lake,40
St. Catharines,38
Cambridge,10
City of Guelph,39
Puslinch,9
Kawartha Lakes,20
Brantford,39
Unknown,12

TTS Data

		N	S	E	W	
AM	Inbound					**0%**
	Outbound	24%	23%	25%	28%	**100%**
PM	Inbound	34%	27%	22%	17%	**100%**
	Outbound					**0%**

Existing Patterns

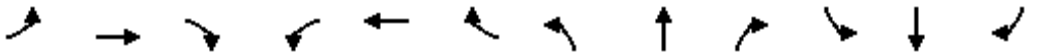
		N	S	E	W	
AM	Inbound	17%	14%	26%	43%	**100%**
	Outbound	15%	16%	33%	35%	**100%**
PM	Inbound	17%	16%	37%	30%	**100%**
	Outbound	15%	16%	24%	45%	**100%**

Trip Distribution

		N	S	E	W	
AM	Inbound	15%	15%	25%	45%	**100%**
	Outbound	25%	25%	25%	25%	**100%**
PM	Inbound	20%	20%	45%	15%	**100%**
	Outbound	15%	15%	25%	45%	**100%**

Appendix F

Synchro Outputs

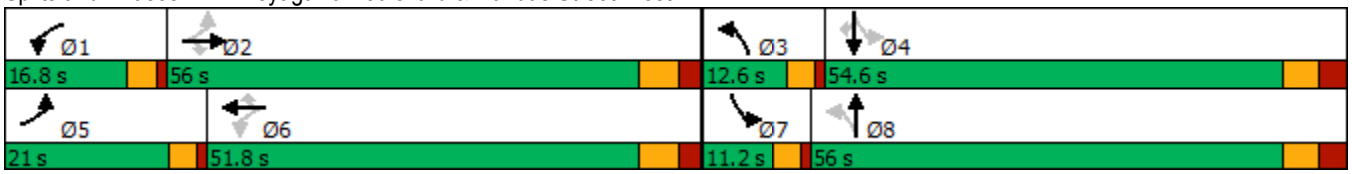


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	1168	222	182	820	37	228	269	74	77	235	353
Future Volume (vph)	302	1168	222	182	820	37	228	269	74	77	235	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.968				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	5043	1601	1807	4856	1555	1738	3413	0	1755	3476	1585
Flt Permitted	0.213			0.166			0.503			0.538		
Satd. Flow (perm)	401	5043	1571	315	4856	1534	919	3413	0	991	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			223			124		27				274
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	315	1217	231	190	854	39	238	280	77	80	245	368
Shared Lane Traffic (%)												
Lane Group Flow (vph)	315	1217	231	190	854	39	238	357	0	80	245	368
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	21.0	56.0	56.0	16.8	51.8	51.8	12.6	56.0		11.2	54.6	54.6
Total Split (%)	15.0%	40.0%	40.0%	12.0%	37.0%	37.0%	9.0%	40.0%		8.0%	39.0%	39.0%
Maximum Green (s)	17.0	49.3	49.3	12.8	45.1	45.1	8.6	49.1		7.2	47.7	47.7
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	51.3	33.7	33.7	41.6	28.1	28.1	29.4	19.8		25.9	15.5	15.5
Actuated g/C Ratio	0.56	0.37	0.37	0.46	0.31	0.31	0.32	0.22		0.28	0.17	0.17
v/c Ratio	0.66	0.65	0.32	0.59	0.57	0.07	0.63	0.47		0.23	0.41	0.74
Control Delay	19.3	26.0	4.6	20.6	28.1	0.2	33.8	32.9		24.5	36.7	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	19.3	26.0	4.6	20.6	28.1	0.2	33.8	32.9		24.5	36.7	20.6
LOS	B	C	A	C	C	A	C	C		C	D	C
Approach Delay		22.0			25.7			33.3			26.8	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 91			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	315	1217	231	190	854	39	238	357	80	245	368
v/c Ratio	0.66	0.65	0.32	0.59	0.57	0.07	0.63	0.47	0.23	0.41	0.74
Control Delay	19.3	26.0	4.6	20.6	28.1	0.2	33.8	32.9	24.5	36.7	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	26.0	4.6	20.6	28.1	0.2	33.8	32.9	24.5	36.7	20.6
Queue Length 50th (m)	25.0	59.8	0.8	13.9	43.8	0.0	30.1	26.7	9.1	19.6	14.2
Queue Length 95th (m)	56.2	93.2	15.8	33.3	66.5	0.0	61.7	48.0	23.1	36.3	50.7
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	492	2806	972	367	2471	841	376	1903	344	1871	968
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.43	0.24	0.52	0.35	0.05	0.63	0.19	0.23	0.13	0.38

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	1168	222	182	820	37	228	269	74	77	235	353
Future Volume (vph)	302	1168	222	182	820	37	228	269	74	77	235	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	5043	1575	1807	4856	1535	1737	3413		1753	3476	1565
Flt Permitted	0.21	1.00	1.00	0.17	1.00	1.00	0.50	1.00		0.54	1.00	1.00
Satd. Flow (perm)	402	5043	1575	316	4856	1535	920	3413		993	3476	1565
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	315	1217	231	190	854	39	238	280	77	80	245	368
RTOR Reduction (vph)	0	0	141	0	0	27	0	21	0	0	0	224
Lane Group Flow (vph)	315	1217	90	190	854	12	238	336	0	80	245	144
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	48.5	33.7	33.7	38.9	28.1	28.1	28.6	19.8		22.2	16.6	16.6
Effective Green, g (s)	48.5	33.7	33.7	38.9	28.1	28.1	28.6	19.8		22.2	16.6	16.6
Actuated g/C Ratio	0.53	0.37	0.37	0.43	0.31	0.31	0.31	0.22		0.24	0.18	0.18
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	461	1857	580	310	1491	471	366	738		287	630	283
v/s Ratio Prot	c0.12	0.24		0.07	0.18		c0.06	0.10		0.02	0.07	
v/s Ratio Perm	c0.24		0.06	0.19		0.01	c0.14			0.05		0.09
v/c Ratio	0.68	0.66	0.16	0.61	0.57	0.03	0.65	0.46		0.28	0.39	0.51
Uniform Delay, d1	13.6	24.1	19.4	17.4	26.7	22.1	25.5	31.2		27.5	33.0	33.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.8	0.1	3.6	0.5	0.0	4.1	0.4		0.5	0.4	1.4
Delay (s)	17.7	24.9	19.5	20.9	27.2	22.2	29.6	31.6		28.0	33.4	35.2
Level of Service	B	C	B	C	C	C	C	C		C	C	D
Approach Delay (s)		22.9			25.9			30.8			33.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	91.5	Sum of lost time (s)	21.6
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

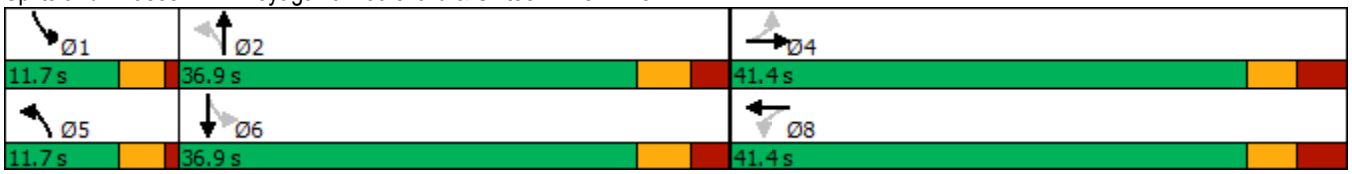
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Future Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99		1.00		
Frt		0.888			0.984			0.976			0.999	
Flt Protected		0.996			0.959		0.950			0.950		
Satd. Flow (prot)	0	1681	0	0	1782	0	1825	3493	0	1825	3575	0
Flt Permitted		0.964			0.723		0.437			0.346		
Satd. Flow (perm)	0	1627	0	0	1343	0	840	3493	0	662	3575	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			9			27				
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	4	4	38	227	5	31	43	531	103	61	570	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	263	0	43	634	0	61	572	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	41.4	41.4		41.4	41.4		11.7	36.9		11.7	36.9	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		13.0%	41.0%		13.0%	41.0%	
Maximum Green (s)	34.6	34.6		34.6	34.6		7.7	30.6		7.7	30.6	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		17.1			17.1		27.8	21.6		28.6	23.7	
Actuated g/C Ratio		0.29			0.29		0.48	0.37		0.49	0.41	
v/c Ratio		0.09			0.66		0.08	0.48		0.13	0.39	
Control Delay		0.1			10.0		3.0	10.0		2.4	10.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.1			10.0		3.0	10.0		2.4	10.7	
LOS		A			A		A	A		A	B	
Approach Delay		0.1			10.0			9.5			9.9	
Approach LOS		A			A			A			A	

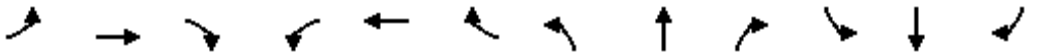
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58.3			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	263	43	634	61	572
v/c Ratio	0.09	0.66	0.08	0.48	0.13	0.39
Control Delay	0.1	10.0	3.0	10.0	2.4	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	10.0	3.0	10.0	2.4	10.7
Queue Length 50th (m)	0.7	25.3	2.0	28.2	2.8	17.8
Queue Length 95th (m)	6.9	51.1	7.5	53.2	9.8	49.1
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	1023	836	539	1927	486	1965
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.31	0.08	0.33	0.13	0.29

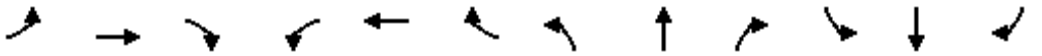
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Future Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.89			0.98		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1682			1781		1825	3493		1823	3577	
Flt Permitted		0.96			0.72		0.44	1.00		0.35	1.00	
Satd. Flow (perm)		1629			1342		839	3493		665	3577	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	4	38	227	5	31	43	531	103	61	570	2
RTOR Reduction (vph)	0	27	0	0	6	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	19	0	0	257	0	43	617	0	61	572	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.1			17.1		24.8	22.4		27.6	23.8	
Effective Green, g (s)		17.1			17.1		24.8	22.4		27.6	23.8	
Actuated g/C Ratio		0.28			0.28		0.41	0.37		0.46	0.39	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		461			379		383	1295		376	1409	
v/s Ratio Prot							0.00	c0.18		c0.01	0.16	
v/s Ratio Perm		0.01			c0.19		0.04			0.06		
v/c Ratio		0.04			0.68		0.11	0.48		0.16	0.41	
Uniform Delay, d1		15.7			19.2		10.7	14.5		9.3	13.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			4.7		0.1	0.3		0.2	0.2	
Delay (s)		15.7			23.9		10.9	14.8		9.5	13.4	
Level of Service		B			C		B	B		A	B	
Approach Delay (s)		15.7			23.9			14.5			13.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	17.1
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

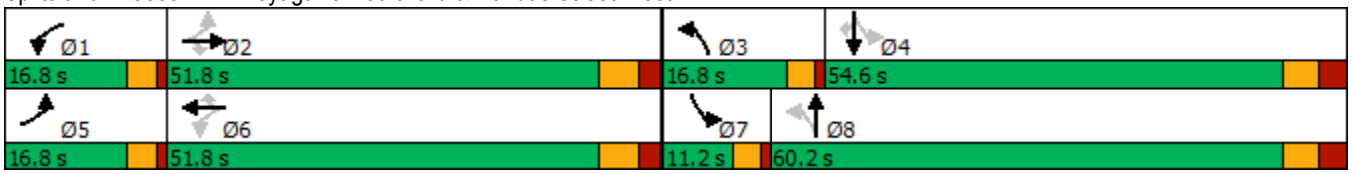


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	887	208	237	1396	63	270	367	102	78	283	397
Future Volume (vph)	252	887	208	237	1396	63	270	367	102	78	283	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.967				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	5043	1617	1825	5092	1541	1789	3464	0	1807	3579	1585
Flt Permitted	0.099			0.235			0.454			0.474		
Satd. Flow (perm)	186	5043	1588	451	5092	1521	854	3464	0	893	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			217			124		29				249
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	263	924	217	247	1454	66	281	382	106	81	295	414
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	924	217	247	1454	66	281	488	0	81	295	414
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	16.8	51.8	51.8	16.8	51.8	51.8	16.8	60.2		11.2	54.6	54.6
Total Split (%)	12.0%	37.0%	37.0%	12.0%	37.0%	37.0%	12.0%	43.0%		8.0%	39.0%	39.0%
Maximum Green (s)	12.8	45.1	45.1	12.8	45.1	45.1	12.8	53.3		7.2	47.7	47.7
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	56.3	40.4	40.4	54.6	39.6	39.6	40.5	29.0		31.0	20.8	20.8
Actuated g/C Ratio	0.52	0.37	0.37	0.50	0.37	0.37	0.37	0.27		0.29	0.19	0.19
v/c Ratio	0.91	0.49	0.30	0.64	0.78	0.10	0.66	0.51		0.26	0.43	0.83
Control Delay	62.7	28.0	4.7	23.5	34.6	0.3	33.7	34.5		25.0	40.2	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	62.7	28.0	4.7	23.5	34.6	0.3	33.7	34.5		25.0	40.2	31.0
LOS	E	C	A	C	C	A	C	C		C	D	C
Approach Delay		30.9			31.8			34.2			33.9	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 108.2			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 32.2		Intersection LOS: C	
Intersection Capacity Utilization 92.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

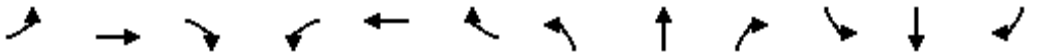




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	263	924	217	247	1454	66	281	488	81	295	414
v/c Ratio	0.91	0.49	0.30	0.64	0.78	0.10	0.66	0.51	0.26	0.43	0.83
Control Delay	62.7	28.0	4.7	23.5	34.6	0.3	33.7	34.5	25.0	40.2	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	28.0	4.7	23.5	34.6	0.3	33.7	34.5	25.0	40.2	31.0
Queue Length 50th (m)	38.8	54.2	0.0	25.6	97.4	0.0	44.9	45.9	11.4	29.7	35.3
Queue Length 95th (m)	#108.0	80.8	16.3	51.9	140.0	0.0	68.8	63.3	21.8	43.3	73.4
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	290	2143	799	397	2164	717	432	1754	318	1609	839
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.43	0.27	0.62	0.67	0.09	0.65	0.28	0.25	0.18	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	887	208	237	1396	63	270	367	102	78	283	397
Future Volume (vph)	252	887	208	237	1396	63	270	367	102	78	283	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	5043	1590	1825	5092	1521	1788	3468		1801	3579	1563
Flt Permitted	0.10	1.00	1.00	0.24	1.00	1.00	0.45	1.00		0.47	1.00	1.00
Satd. Flow (perm)	186	5043	1590	452	5092	1521	854	3468		899	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	262	924	217	247	1454	66	281	382	106	81	295	414
RTOR Reduction (vph)	0	0	136	0	0	42	0	21	0	0	0	199
Lane Group Flow (vph)	263	924	81	247	1454	24	281	467	0	81	295	215
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	53.6	40.5	40.5	51.8	39.6	39.6	38.5	29.0		27.3	21.8	21.8
Effective Green, g (s)	53.6	40.5	40.5	51.8	39.6	39.6	38.5	29.0		27.3	21.8	21.8
Actuated g/C Ratio	0.49	0.37	0.37	0.48	0.36	0.36	0.35	0.27		0.25	0.20	0.20
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	284	1877	591	369	1853	553	411	924		271	717	313
v/s Ratio Prot	c0.11	0.18		0.08	0.29		c0.08	0.13		0.02	0.08	
v/s Ratio Perm	c0.34		0.05	0.24		0.02	c0.16			0.06		0.14
v/c Ratio	0.93	0.49	0.14	0.67	0.78	0.04	0.68	0.51		0.30	0.41	0.69
Uniform Delay, d1	28.8	26.2	22.6	17.8	30.8	22.4	27.3	33.8		32.0	37.9	40.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.2	0.2	0.1	4.6	2.3	0.0	4.7	0.4		0.6	0.4	6.1
Delay (s)	63.0	26.5	22.7	22.4	33.1	22.4	31.9	34.3		32.6	38.3	46.5
Level of Service	E	C	C	C	C	C	C	C		C	D	D
Approach Delay (s)		32.7			31.2			33.4			42.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	108.8	Sum of lost time (s)	21.6
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

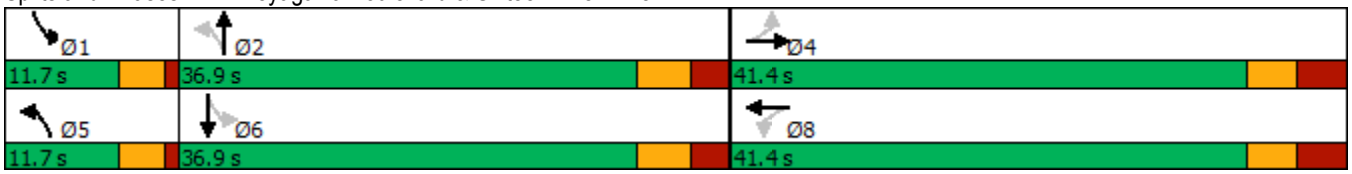
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Future Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99		1.00		
Frt		0.888			0.984			0.976			0.999	
Flt Protected		0.996			0.959		0.950			0.950		
Satd. Flow (prot)	0	1681	0	0	1782	0	1825	3493	0	1825	3575	0
Flt Permitted		0.964			0.723		0.437			0.346		
Satd. Flow (perm)	0	1627	0	0	1343	0	840	3493	0	662	3575	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			9			27				
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	4	4	38	227	5	31	43	531	103	61	570	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	263	0	43	634	0	61	572	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	41.4	41.4		41.4	41.4		11.7	36.9		11.7	36.9	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		13.0%	41.0%		13.0%	41.0%	
Maximum Green (s)	34.6	34.6		34.6	34.6		7.7	30.6		7.7	30.6	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		17.1			17.1		27.8	21.6		28.6	23.7	
Actuated g/C Ratio		0.29			0.29		0.48	0.37		0.49	0.41	
v/c Ratio		0.09			0.66		0.08	0.48		0.13	0.39	
Control Delay		7.9			27.0		8.8	17.3		9.1	15.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		7.9			27.0		8.8	17.3		9.1	15.6	
LOS		A			C		A	B		A	B	
Approach Delay		7.9			27.0			16.8			15.0	
Approach LOS		A			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58.3			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive



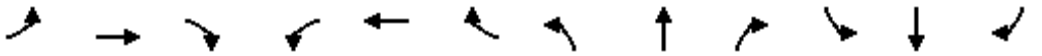
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	263	43	634	61	572
v/c Ratio	0.09	0.66	0.08	0.48	0.13	0.39
Control Delay	7.9	27.0	8.8	17.3	9.1	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	27.0	8.8	17.3	9.1	15.6
Queue Length 50th (m)	0.7	25.3	2.0	28.2	2.8	17.8
Queue Length 95th (m)	6.9	51.1	7.5	53.2	9.8	49.1
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	1023	836	539	1927	486	1965
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.31	0.08	0.33	0.13	0.29

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Future Volume (vph)	4	4	35	211	5	29	40	494	96	57	530	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.89			0.98		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1682			1781		1825	3493		1823	3577	
Flt Permitted		0.96			0.72		0.44	1.00		0.35	1.00	
Satd. Flow (perm)		1629			1342		839	3493		665	3577	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	4	38	227	5	31	43	531	103	61	570	2
RTOR Reduction (vph)	0	27	0	0	6	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	19	0	0	257	0	43	617	0	61	572	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.1			17.1		24.8	22.4		27.6	23.8	
Effective Green, g (s)		17.1			17.1		24.8	22.4		27.6	23.8	
Actuated g/C Ratio		0.28			0.28		0.41	0.37		0.46	0.39	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		461			379		383	1295		376	1409	
v/s Ratio Prot							0.00	c0.18		c0.01	0.16	
v/s Ratio Perm		0.01			c0.19		0.04			0.06		
v/c Ratio		0.04			0.68		0.11	0.48		0.16	0.41	
Uniform Delay, d1		15.7			19.2		10.7	14.5		9.3	13.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			4.7		0.1	0.3		0.2	0.2	
Delay (s)		15.7			23.9		10.9	14.8		9.5	13.4	
Level of Service		B			C		B	B		A	B	
Approach Delay (s)		15.7			23.9			14.5			13.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	17.1
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

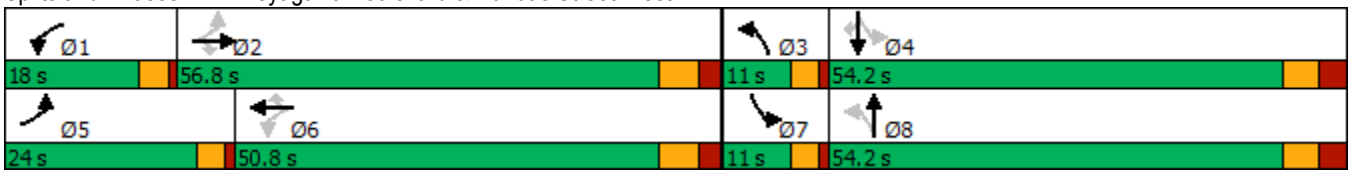


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Future Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1601	1807	4269	1555	1738	3416	0	1755	3476	1585
Flt Permitted	0.127			0.110			0.521			0.380		
Satd. Flow (perm)	239	4433	1571	209	4269	1534	952	3416	0	700	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198			124		25				296
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	374	1370	260	242	1015	44	267	331	86	103	307	414
Shared Lane Traffic (%)												
Lane Group Flow (vph)	374	1370	260	242	1015	44	267	417	0	103	307	414
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	24.0	56.8	56.8	18.0	50.8	50.8	11.0	54.2		11.0	54.2	54.2
Total Split (%)	17.1%	40.6%	40.6%	12.9%	36.3%	36.3%	7.9%	38.7%		7.9%	38.7%	38.7%
Maximum Green (s)	20.0	50.1	50.1	14.0	44.1	44.1	7.0	47.3		7.0	47.3	47.3
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	63.7	42.6	42.6	53.5	36.5	36.5	29.7	19.7		29.7	19.7	19.7
Actuated g/C Ratio	0.60	0.40	0.40	0.51	0.35	0.35	0.28	0.19		0.28	0.19	0.19
v/c Ratio	0.85	0.77	0.35	0.75	0.69	0.07	0.83	0.63		0.38	0.47	0.78
Control Delay	42.5	30.8	7.4	40.5	32.6	0.2	55.8	42.1		31.7	41.2	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	42.5	30.8	7.4	40.5	32.6	0.2	55.8	42.1		31.7	41.2	23.2
LOS	D	C	A	D	C	A	E	D		C	D	C
Approach Delay		30.0			33.0			47.5			31.0	
Approach LOS		C			C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 105.6			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 33.4		Intersection LOS: C	
Intersection Capacity Utilization 82.9%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	374	1370	260	242	1015	44	267	417	103	307	414
v/c Ratio	0.85	0.77	0.35	0.75	0.69	0.07	0.83	0.63	0.38	0.47	0.78
Control Delay	42.5	30.8	7.4	40.5	32.6	0.2	55.8	42.1	31.7	41.2	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	30.8	7.4	40.5	32.6	0.2	55.8	42.1	31.7	41.2	23.2
Queue Length 50th (m)	49.8	95.0	7.4	29.1	70.9	0.0	44.4	39.7	15.4	30.1	22.2
Queue Length 95th (m)	#127.0	140.1	27.7	#82.1	105.0	0.0	#75.1	58.4	29.7	45.5	60.8
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	442	2137	859	321	1811	722	321	1568	268	1581	873
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.64	0.30	0.75	0.56	0.06	0.83	0.27	0.38	0.19	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Future Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1574	1807	4269	1534	1737	3417		1754	3476	1564
Flt Permitted	0.13	1.00	1.00	0.11	1.00	1.00	0.52	1.00		0.38	1.00	1.00
Satd. Flow (perm)	240	4433	1574	208	4269	1534	953	3417		701	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	374	1370	260	242	1015	44	267	331	86	103	307	414
RTOR Reduction (vph)	0	0	118	0	0	29	0	20	0	0	0	241
Lane Group Flow (vph)	374	1370	142	242	1015	15	267	397	0	103	307	173
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	60.8	42.6	42.6	50.7	36.5	36.5	26.8	19.7		26.8	19.7	19.7
Effective Green, g (s)	60.8	42.6	42.6	50.7	36.5	36.5	26.8	19.7		26.8	19.7	19.7
Actuated g/C Ratio	0.58	0.40	0.40	0.48	0.35	0.35	0.25	0.19		0.25	0.19	0.19
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	437	1795	637	316	1481	532	295	639		249	650	292
v/s Ratio Prot	c0.16	0.31		0.10	0.24		c0.06	0.12		0.03	0.09	
v/s Ratio Perm	c0.33		0.09	0.27		0.01	c0.17			0.08		0.11
v/c Ratio	0.86	0.76	0.22	0.77	0.69	0.03	0.91	0.62		0.41	0.47	0.59
Uniform Delay, d1	24.9	27.0	20.5	22.7	29.4	22.7	36.5	39.3		31.2	38.1	39.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.1	2.0	0.2	10.6	1.3	0.0	29.1	1.9		1.1	0.5	3.2
Delay (s)	40.0	28.9	20.7	33.2	30.8	22.7	65.6	41.2		32.3	38.7	42.3
Level of Service	D	C	C	C	C	C	E	D		C	D	D
Approach Delay (s)		29.9			30.9			50.7			39.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.2	Sum of lost time (s)	21.6
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

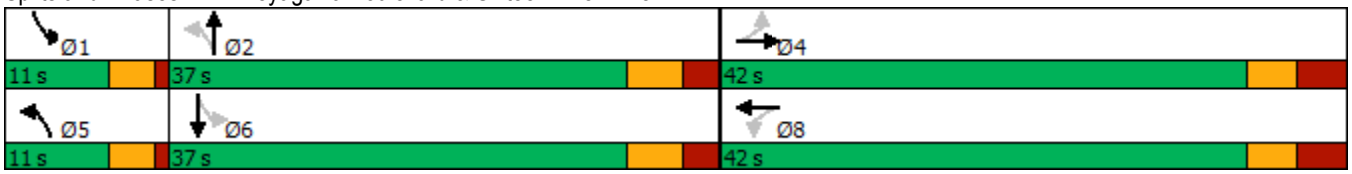
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	18	172	1	61	19	591	106	38	622	3
Future Volume (vph)	1	0	18	172	1	61	19	591	106	38	622	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			1.00		1.00		
Frt		0.872			0.965			0.977			0.999	
Flt Protected		0.997			0.964		0.950			0.950		
Satd. Flow (prot)	0	1650	0	0	1670	0	1722	3439	0	1601	3541	0
Flt Permitted		0.981			0.771		0.406			0.317		
Satd. Flow (perm)	0	1623	0	0	1335	0	736	3439	0	533	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			23			25			1	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Adj. Flow (vph)	1	0	18	176	1	62	19	603	108	39	635	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	239	0	19	711	0	39	638	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		6.5	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.0	30.3		11.0	30.3	
Total Split (s)	42.0	42.0		42.0	42.0		11.0	37.0		11.0	37.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		12.2%	41.1%		12.2%	41.1%	
Maximum Green (s)	35.2	35.2		35.2	35.2		7.0	30.7		7.0	30.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		15.6			15.6		26.9	22.3		27.6	24.1	
Actuated g/C Ratio		0.28			0.28		0.49	0.40		0.50	0.44	
v/c Ratio		0.04			0.61		0.04	0.51		0.10	0.41	
Control Delay		0.1			23.7		8.2	15.4		8.5	13.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.1			23.7		8.2	15.4		8.5	13.1	
LOS		A			C		A	B		A	B	
Approach Delay		0.1			23.7			15.2			12.9	
Approach LOS		A			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 55.1			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





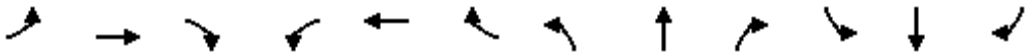
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	239	19	711	39	638
v/c Ratio	0.04	0.61	0.04	0.51	0.10	0.41
Control Delay	0.1	23.7	8.2	15.4	8.5	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	23.7	8.2	15.4	8.5	13.1
Queue Length 50th (m)	0.0	14.8	0.8	21.1	1.7	19.1
Queue Length 95th (m)	0.0	45.9	4.1	58.1	6.7	52.4
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	1120	905	491	2027	409	2090
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.26	0.04	0.35	0.10	0.31

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	18	172	1	61	19	591	106	38	622	3
Future Volume (vph)	1	0	18	172	1	61	19	591	106	38	622	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.87			0.96		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1670		1722	3441		1600	3542	
Flt Permitted		0.98			0.77		0.41	1.00		0.32	1.00	
Satd. Flow (perm)		1623			1335		735	3441		535	3542	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	0	18	176	1	62	19	603	108	39	635	3
RTOR Reduction (vph)	0	14	0	0	17	0	0	15	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	222	0	19	696	0	39	637	0
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		15.6			15.6		24.0	23.0		26.4	24.2	
Effective Green, g (s)		15.6			15.6		24.0	23.0		26.4	24.2	
Actuated g/C Ratio		0.27			0.27		0.41	0.40		0.46	0.42	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		437			359		321	1366		284	1480	
v/s Ratio Prot							0.00	c0.20		c0.01	0.18	
v/s Ratio Perm		0.00			c0.17		0.02			0.06		
v/c Ratio		0.01			0.62		0.06	0.51		0.14	0.43	
Uniform Delay, d1		15.5			18.5		10.0	13.2		8.9	12.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			3.2		0.1	0.3		0.2	0.2	
Delay (s)		15.5			21.7		10.1	13.5		9.2	12.2	
Level of Service		B			C		B	B		A	B	
Approach Delay (s)		15.5			21.7			13.4			12.0	
Approach LOS		B			C			B			B	

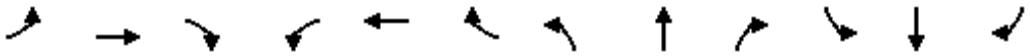
Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	17.1
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	19	0	0	23	0	0	0	0	0	0	0
Future Volume (vph)	0	19	0	0	23	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	0	0	25	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	25	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

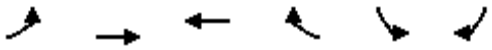
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	0	0	23	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	19	0	0	23	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	21	0	0	25	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	25			21			46	46	21	46	46	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			21			46	46	21	46	46	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1589			1595			955	846	1056	955	846	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	25	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1589	1595	1700	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS			A	A

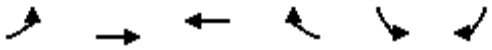
Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	6.7%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1924	1628	0	0	0
Future Volume (vph)	0	1924	1628	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1883	0	1883
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1883	0	1883
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2091	1770	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2091	1770	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

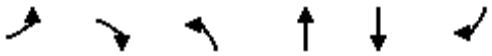
* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1924	1628	0	0	0
Future Volume (Veh/h)	0	1924	1628	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2091	1770	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.82				0.82	0.82
vC, conflicting volume	1770				2467	590
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1164				2016	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	488				42	887

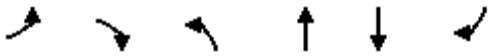
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	697	697	697	590	590	590	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.41	0.41	0.41	0.35	0.35	0.35	0.02	0.11
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								A
Approach Delay (s)	0.0			0.0				0.0
Approach LOS								A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	720	815	0
Future Volume (vph)	0	0	0	720	815	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	1883	0	3579	3579	0
Flt Permitted						
Satd. Flow (perm)	0	1883	0	3579	3579	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	783	886	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	783	886	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

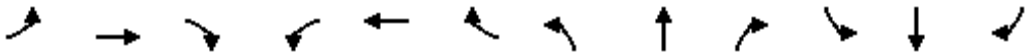
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	720	815	0
Future Volume (Veh/h)	0	0	0	720	815	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	783	886	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.92	0.88	0.88			
vC, conflicting volume	1278	443	886			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	707	81	587			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	340	843	862			

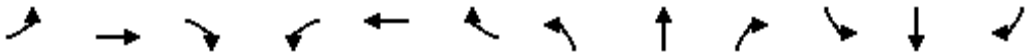
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	392	392	591	295
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.23	0.23	0.35	0.17
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.12	0.05	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	19	0	0	23	0	0
Future Volume (vph)	19	0	0	23	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	25	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	23	0	0
Future Volume (Veh/h)	19	0	0	23	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	25	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			21		46	21
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		46	21
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1595		964	1056

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	25	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1595	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	1883	0	0	1883
Flt Permitted						
Satd. Flow (perm)	1883	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.04	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	19	0	0	23	0	0
Future Volume (vph)	19	0	0	23	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	25	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	23	0	0
Future Volume (Veh/h)	19	0	0	23	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	25	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			21		46	21
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		46	21
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1595		964	1056

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	25	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1595	1700
Volume to Capacity	0.01	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

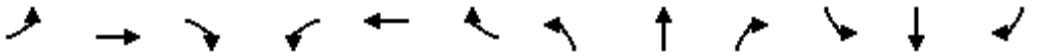
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1023	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.01	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

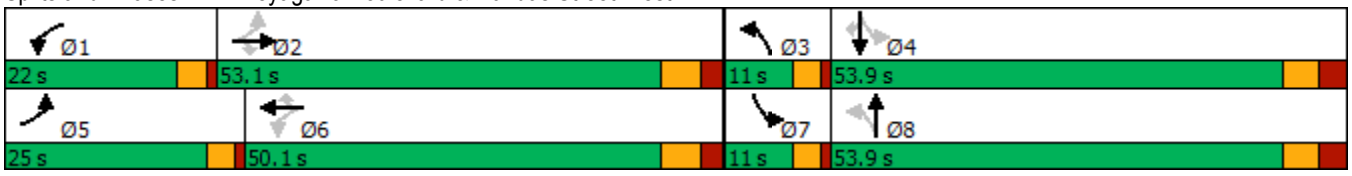


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Future Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1617	1825	4476	1541	1789	3477	0	1807	3579	1585
Flt Permitted	0.085			0.161			0.469			0.218		
Satd. Flow (perm)	160	4433	1588	309	4476	1521	882	3477	0	412	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			236			93		23				305
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	357	1040	244	295	1705	80	317	483	119	97	348	466
Shared Lane Traffic (%)												
Lane Group Flow (vph)	357	1040	244	295	1705	80	317	602	0	97	348	466
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	25.0	53.1	53.1	22.0	50.1	50.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.9%	37.9%	37.9%	15.7%	35.8%	35.8%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	21.0	46.4	46.4	18.0	43.4	43.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	70.5	47.3	47.3	63.6	43.5	43.5	36.6	26.7		36.6	26.7	26.7
Actuated g/C Ratio	0.59	0.39	0.39	0.53	0.36	0.36	0.30	0.22		0.30	0.22	0.22
v/c Ratio	0.94	0.60	0.32	0.77	1.05	0.13	0.98	0.76		0.47	0.44	0.80
Control Delay	67.8	31.6	5.1	34.7	74.4	4.9	84.5	48.4		34.9	41.4	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	67.8	31.6	5.1	34.7	74.4	4.9	84.5	48.4		34.9	41.4	25.4
LOS	E	C	A	C	E	A	F	D		C	D	C
Approach Delay		35.5			66.1			60.8			32.5	
Approach LOS		D			E			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 120			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 50.7		Intersection LOS: D	
Intersection Capacity Utilization 103.1%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	357	1040	244	295	1705	80	317	602	97	348	466
v/c Ratio	0.94	0.60	0.32	0.77	1.05	0.13	0.98	0.76	0.47	0.44	0.80
Control Delay	67.8	31.6	5.1	34.7	74.4	4.9	84.5	48.4	34.9	41.4	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	31.6	5.1	34.7	74.4	4.9	84.5	48.4	34.9	41.4	25.4
Queue Length 50th (m)	65.6	79.2	1.1	34.1	~179.0	0.0	59.5	67.5	15.8	37.3	36.7
Queue Length 95th (m)	#144.5	113.6	18.8	#89.5	#252.6	8.7	#101.4	86.6	27.9	50.6	76.5
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	380	1745	768	393	1624	611	322	1380	207	1406	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.60	0.32	0.75	1.05	0.13	0.98	0.44	0.47	0.25	0.58

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Future Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1589	1825	4476	1521	1788	3480		1805	3579	1563
Flt Permitted	0.08	1.00	1.00	0.16	1.00	1.00	0.47	1.00		0.22	1.00	1.00
Satd. Flow (perm)	159	4433	1589	310	4476	1521	882	3480		413	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	357	1040	244	295	1705	80	317	483	119	97	348	466
RTOR Reduction (vph)	0	0	143	0	0	51	0	18	0	0	0	237
Lane Group Flow (vph)	357	1040	101	295	1705	29	317	584	0	97	348	229
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	68.4	47.3	47.3	60.8	43.5	43.5	33.7	26.7		33.7	26.7	26.7
Effective Green, g (s)	68.4	47.3	47.3	60.8	43.5	43.5	33.7	26.7		33.7	26.7	26.7
Actuated g/C Ratio	0.57	0.39	0.39	0.51	0.36	0.36	0.28	0.22		0.28	0.22	0.22
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	377	1748	626	375	1623	551	300	774		197	796	348
v/s Ratio Prot	c0.17	0.23		0.11	c0.38		c0.06	0.17		0.03	0.10	
v/s Ratio Perm	0.37		0.06	0.28		0.02	c0.23			0.11		0.15
v/c Ratio	0.95	0.59	0.16	0.79	1.05	0.05	1.06	0.75		0.49	0.44	0.66
Uniform Delay, d1	37.6	28.7	23.5	19.4	38.2	24.8	41.9	43.5		33.5	40.1	42.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	32.6	0.5	0.1	10.4	36.9	0.0	67.7	4.2		1.9	0.4	4.4
Delay (s)	70.1	29.3	23.6	29.8	75.1	24.9	109.6	47.7		35.5	40.5	46.9
Level of Service	E	C	C	C	E	C	F	D		D	D	D
Approach Delay (s)		37.3			66.8			69.1			43.2	
Approach LOS		D			E			E			D	

Intersection Summary					
HCM 2000 Control Delay	54.6	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	1.03				
Actuated Cycle Length (s)	119.9	Sum of lost time (s)	21.6		
Intersection Capacity Utilization	103.1%	ICU Level of Service	G		
Analysis Period (min)	15				

c Critical Lane Group

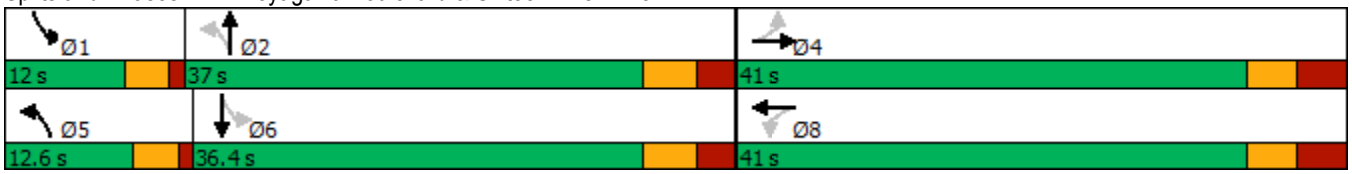
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	259	5	62	40	560	194	109	596	2
Future Volume (vph)	4	4	35	259	5	62	40	560	194	109	596	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99		1.00		
Frt		0.888			0.974			0.961				
Flt Protected		0.996			0.962		0.950			0.950		
Satd. Flow (prot)	0	1681	0	0	1772	0	1825	3419	0	1825	3579	0
Flt Permitted		0.964			0.739		0.379			0.225		
Satd. Flow (perm)	0	1627	0	0	1360	0	728	3419	0	431	3579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			15			58				
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	4	4	38	278	5	67	43	602	209	117	641	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	350	0	43	811	0	117	643	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		12.6	37.0		12.0	36.4	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		14.0%	41.1%		13.3%	40.4%	
Maximum Green (s)	34.2	34.2		34.2	34.2		8.6	30.7		8.0	30.1	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		22.4			22.4		32.6	24.8		34.3	27.6	
Actuated g/C Ratio		0.32			0.32		0.47	0.35		0.49	0.39	
v/c Ratio		0.08			0.78		0.09	0.65		0.32	0.45	
Control Delay		8.0			34.9		10.8	22.4		12.8	19.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		8.0			34.9		10.8	22.4		12.8	19.5	
LOS		A			C		B	C		B	B	
Approach Delay		8.0			34.9			21.8			18.5	
Approach LOS		A			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 69.9
Natural Cycle: 85
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 22.5 Intersection LOS: C
Intersection Capacity Utilization 67.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





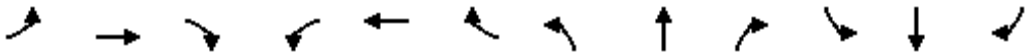
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	350	43	811	117	643
v/c Ratio	0.08	0.78	0.09	0.65	0.32	0.45
Control Delay	8.0	34.9	10.8	22.4	12.8	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	34.9	10.8	22.4	12.8	19.5
Queue Length 50th (m)	0.7	39.3	2.6	45.6	7.4	35.8
Queue Length 95th (m)	7.4	78.1	8.7	77.7	19.3	62.5
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	865	715	494	1628	381	1655
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.49	0.09	0.50	0.31	0.39

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	259	5	62	40	560	194	109	596	2
Future Volume (vph)	4	4	35	259	5	62	40	560	194	109	596	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.89			0.97		1.00	0.96		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1682			1771		1825	3422		1824	3577	
Flt Permitted		0.96			0.74		0.38	1.00		0.22	1.00	
Satd. Flow (perm)		1628			1361		727	3422		432	3577	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	4	38	278	5	67	43	602	209	117	641	2
RTOR Reduction (vph)	0	26	0	0	10	0	0	37	0	0	0	0
Lane Group Flow (vph)	0	20	0	0	340	0	43	774	0	117	643	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.4			22.4		29.5	25.7		33.3	27.6	
Effective Green, g (s)		22.4			22.4		29.5	25.7		33.3	27.6	
Actuated g/C Ratio		0.32			0.32		0.42	0.36		0.47	0.39	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		514			429		361	1240		314	1392	
v/s Ratio Prot							0.01	c0.23		c0.03	0.18	
v/s Ratio Perm		0.01			c0.25		0.04			0.14		
v/c Ratio		0.04			0.79		0.12	0.62		0.37	0.46	
Uniform Delay, d1		16.8			22.1		12.4	18.6		11.5	16.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			9.6		0.1	1.0		0.7	0.2	
Delay (s)		16.8			31.8		12.6	19.6		12.2	16.4	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		16.8			31.8			19.3			15.7	
Approach LOS		B			C			B			B	

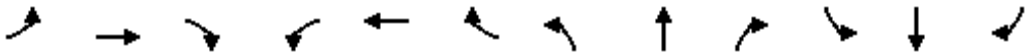
Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	17.1
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	43	0	0	47	0	0	0	0	0	0	0
Future Volume (vph)	0	43	0	0	47	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	47	0	0	51	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	51	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

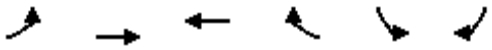
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	43	0	0	47	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	43	0	0	47	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	47	0	0	51	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	51			47			98	98	47	98	98	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51			47			98	98	47	98	98	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1555			1560			884	792	1022	884	792	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	47	51	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1555	1560	1700	1700
Volume to Capacity	0.00	0.00	0.04	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS			A	A

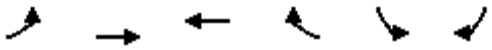
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1576	2388	0	0	0
Future Volume (vph)	0	1576	2388	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1883	0	1883
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1883	0	1883
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1713	2596	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1713	2596	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

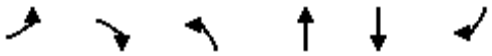
* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1576	2388	0	0	0
Future Volume (Veh/h)	0	1576	2388	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1713	2596	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.66				0.66	0.66
vC, conflicting volume	2596				3167	865
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1599				2469	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	266				16	712

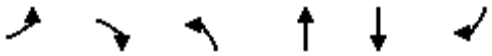
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	571	571	571	865	865	865	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.34	0.34	0.34	0.51	0.51	0.51	0.06	0.18
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								A
Approach Delay (s)	0.0			0.0				0.0
Approach LOS								A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	886	895	0
Future Volume (vph)	0	0	0	886	895	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	1883	0	3579	3579	0
Flt Permitted						
Satd. Flow (perm)	0	1883	0	3579	3579	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	963	973	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	963	973	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

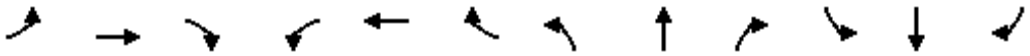
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	886	895	0
Future Volume (Veh/h)	0	0	0	886	895	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	963	973	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.92	0.87	0.87			
vC, conflicting volume	1454	486	973			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	684	104	665			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	353	807	799			

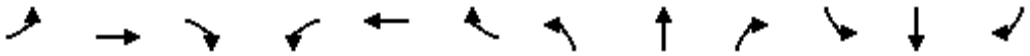
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	482	482	649	324
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.28	0.28	0.38	0.19
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.09	0.06	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	47	0	0
Future Volume (vph)	43	0	0	47	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	0	51	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	51	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	0	47	0	0
Future Volume (Veh/h)	43	0	0	47	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	0	51	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			47		98	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		98	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1560		901	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	51	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1560	1700
Volume to Capacity	0.03	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	1883	0	0	1883
Flt Permitted						
Satd. Flow (perm)	1883	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.06	0.06	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	47	0	0
Future Volume (vph)	43	0	0	47	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	0	51	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	51	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	0	47	0	0
Future Volume (Veh/h)	43	0	0	47	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	0	51	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			47		98	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		98	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1560		901	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	51	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1560	1700
Volume to Capacity	0.03	0.00	0.13
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1023	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

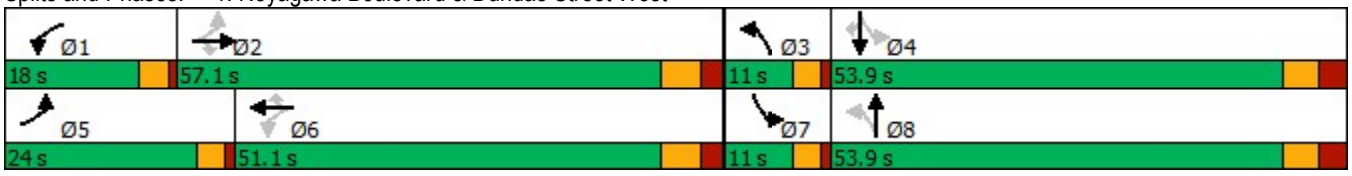
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Future Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1601	1807	4269	1555	1738	3419	0	1755	3476	1585
Flt Permitted	0.127			0.109			0.486			0.372		
Satd. Flow (perm)	239	4433	1571	207	4269	1534	888	3419	0	685	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199			124		24				293
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	398	1370	260	242	1016	56	267	340	86	130	334	417
Shared Lane Traffic (%)												
Lane Group Flow (vph)	398	1370	260	242	1016	56	267	426	0	130	334	417
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	24.0	57.1	57.1	18.0	51.1	51.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.1%	40.8%	40.8%	12.9%	36.5%	36.5%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	20.0	50.4	50.4	14.0	44.4	44.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	63.8	42.7	42.7	53.6	36.6	36.6	30.3	20.3		30.3	20.3	20.3
Actuated g/C Ratio	0.60	0.40	0.40	0.50	0.34	0.34	0.29	0.19		0.29	0.19	0.19
v/c Ratio	0.91	0.77	0.35	0.76	0.69	0.09	0.86	0.63		0.49	0.50	0.78
Control Delay	51.0	31.3	7.5	41.5	33.0	0.3	60.1	42.1		34.6	41.6	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	51.0	31.3	7.5	41.5	33.0	0.3	60.1	42.1		34.6	41.6	23.6
LOS	D	C	A	D	C	A	E	D		C	D	C
Approach Delay		32.1			33.2			49.1			32.1	
Approach LOS		C			C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 106.3			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 34.8		Intersection LOS: C	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	398	1370	260	242	1016	56	267	426	130	334	417
v/c Ratio	0.91	0.77	0.35	0.76	0.69	0.09	0.86	0.63	0.49	0.50	0.78
Control Delay	51.0	31.3	7.5	41.5	33.0	0.3	60.1	42.1	34.6	41.6	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	31.3	7.5	41.5	33.0	0.3	60.1	42.1	34.6	41.6	23.6
Queue Length 50th (m)	56.3	95.7	7.4	29.6	71.4	0.0	44.5	41.0	19.8	33.1	23.8
Queue Length 95th (m)	#144.2	143.5	28.1	#84.7	107.4	0.0	#77.8	59.8	36.2	49.3	62.3
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	439	2136	860	318	1812	722	310	1549	267	1562	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.64	0.30	0.76	0.56	0.08	0.86	0.28	0.49	0.21	0.48

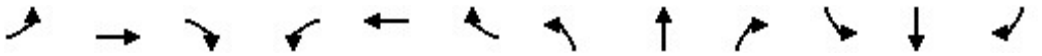
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Future Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1574	1807	4269	1534	1737	3419		1754	3476	1564
Flt Permitted	0.13	1.00	1.00	0.11	1.00	1.00	0.49	1.00		0.37	1.00	1.00
Satd. Flow (perm)	238	4433	1574	207	4269	1534	889	3419		687	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	398	1370	260	242	1016	56	267	340	86	130	334	417
RTOR Reduction (vph)	0	0	119	0	0	37	0	19	0	0	0	237
Lane Group Flow (vph)	398	1370	141	242	1016	19	267	407	0	130	334	180
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	61.0	42.8	42.8	50.9	36.7	36.7	27.4	20.3		27.4	20.3	20.3
Effective Green, g (s)	61.0	42.8	42.8	50.9	36.7	36.7	27.4	20.3		27.4	20.3	20.3
Actuated g/C Ratio	0.58	0.40	0.40	0.48	0.35	0.35	0.26	0.19		0.26	0.19	0.19
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	433	1789	635	313	1478	531	286	654		249	665	299
v/s Ratio Prot	c0.18	0.31		0.10	0.24		c0.06	0.12		0.03	0.10	
v/s Ratio Perm	c0.35		0.09	0.27		0.01	c0.18			0.10		0.12
v/c Ratio	0.92	0.77	0.22	0.77	0.69	0.04	0.93	0.62		0.52	0.50	0.60
Uniform Delay, d1	26.8	27.3	20.7	23.1	29.7	22.9	37.0	39.3		31.6	38.3	39.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.3	2.0	0.2	11.3	1.3	0.0	35.8	1.8		2.0	0.6	3.4
Delay (s)	51.1	29.3	20.9	34.3	31.1	23.0	72.8	41.2		33.6	38.9	42.6
Level of Service	D	C	C	C	C	C	E	D		C	D	D
Approach Delay (s)		32.5			31.3			53.3			39.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	21.6
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

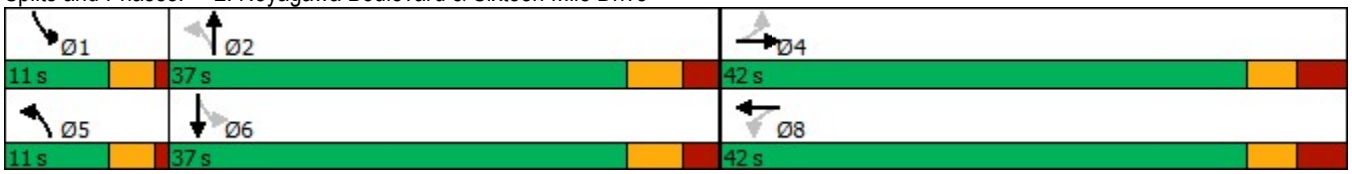


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	0	8	172	1	61	61	591	106	38	630	3
Future Volume (vph)	27	0	8	172	1	61	61	591	106	38	630	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			1.00		1.00		
Frt		0.970			0.965			0.977			0.999	
Flt Protected		0.963			0.964		0.950			0.950		
Satd. Flow (prot)	0	1789	0	0	1670	0	1722	3439	0	1601	3541	0
Flt Permitted		0.731			0.760		0.345			0.355		
Satd. Flow (perm)	0	1358	0	0	1316	0	625	3439	0	597	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			23			25			1	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Adj. Flow (vph)	28	0	8	176	1	62	62	603	108	39	643	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	239	0	62	711	0	39	646	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		6.5	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.0	30.3		11.0	30.3	
Total Split (s)	42.0	42.0		42.0	42.0		11.0	37.0		11.0	37.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%		12.2%	41.1%		12.2%	41.1%	
Maximum Green (s)	35.2	35.2		35.2	35.2		7.0	30.7		7.0	30.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		16.1			16.1		29.2	24.5		28.2	22.3	
Actuated g/C Ratio		0.28			0.28		0.50	0.42		0.49	0.39	
v/c Ratio		0.08			0.62		0.14	0.48		0.10	0.47	
Control Delay		0.4			25.5		8.5	15.1		8.4	16.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.4			25.5		8.5	15.1		8.4	16.9	
LOS		A			C		A	B		A	B	
Approach Delay		0.4			25.5			14.6			16.4	
Approach LOS		A			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 57.9			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





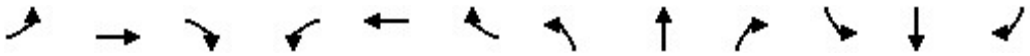
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	239	62	711	39	646
v/c Ratio	0.08	0.62	0.14	0.48	0.10	0.47
Control Delay	0.4	25.5	8.5	15.1	8.4	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.4	25.5	8.5	15.1	8.4	16.9
Queue Length 50th (m)	0.0	20.9	2.7	21.3	1.7	29.2
Queue Length 95th (m)	0.5	46.2	9.5	58.5	6.8	53.6
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	898	847	454	1927	419	1970
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.28	0.14	0.37	0.09	0.33

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	0	8	172	1	61	61	591	106	38	630	3
Future Volume (vph)	27	0	8	172	1	61	61	591	106	38	630	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.96		1.00	0.98		1.00	1.00	
Flt Protected		0.96			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1788			1670		1722	3440		1600	3542	
Flt Permitted		0.73			0.76		0.34	1.00		0.35	1.00	
Satd. Flow (perm)		1358			1316		625	3440		597	3542	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	0	8	176	1	62	62	603	108	39	643	3
RTOR Reduction (vph)	0	26	0	0	17	0	0	15	0	0	1	0
Lane Group Flow (vph)	0	10	0	0	222	0	62	696	0	39	645	0
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.1			16.1		28.1	24.4		25.3	23.0	
Effective Green, g (s)		16.1			16.1		28.1	24.4		25.3	23.0	
Actuated g/C Ratio		0.27			0.27		0.47	0.41		0.42	0.38	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		365			353		360	1401		290	1360	
v/s Ratio Prot							c0.01	c0.20		0.01	0.18	
v/s Ratio Perm		0.01			c0.17		0.07			0.05		
v/c Ratio		0.03			0.63		0.17	0.50		0.13	0.47	
Uniform Delay, d1		16.1			19.3		8.9	13.2		10.3	13.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			3.5		0.2	0.3		0.2	0.3	
Delay (s)		16.2			22.8		9.1	13.5		10.5	14.2	
Level of Service		B			C		A	B		B	B	
Approach Delay (s)		16.2			22.8			13.1			14.0	
Approach LOS		B			C			B			B	

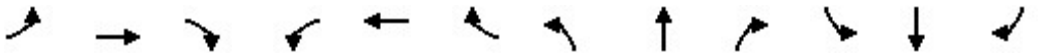
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	17.1
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	10	0	23	0	0	1	0	0	0	0
Future Volume (vph)	0	9	10	0	23	0	0	1	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.929										
Flt Protected												
Satd. Flow (prot)	0	1750	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1750	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	10	11	0	25	0	0	1	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	25	0	0	1	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

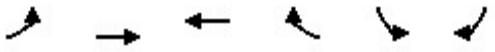
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	9	10	0	23	0	0	1	0	0	0	0
Future Volume (Veh/h)	0	9	10	0	23	0	0	1	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	10	11	0	25	0	0	1	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	25			21			40	40	16	41	46	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			21			40	40	16	41	46	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1589			1595			963	852	1064	962	846	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	25	1	0
Volume Left	0	0	0	0
Volume Right	11	0	0	0
cSH	1589	1595	852	1700
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	9.2	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	9.2	0.0
Approach LOS			A	A

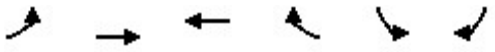
Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1947	1631	1	0	23
Future Volume (vph)	0	1947	1631	1	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1601	0	1629
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2116	1773	1	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2116	1773	1	0	25
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1947	1631	1	0	23
Future Volume (Veh/h)	0	1947	1631	1	0	23
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2116	1773	1	0	25
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.82				0.82	0.82
vC, conflicting volume	1774				2478	591
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1167				2028	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	97
cM capacity (veh/h)	486				41	887

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	705	705	705	591	591	591	1	25
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	1	25
cSH	1700	1700	1700	1700	1700	1700	1700	887
Volume to Capacity	0.41	0.41	0.41	0.35	0.35	0.35	0.00	0.03
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2
Lane LOS								A
Approach Delay (s)	0.0			0.0				9.2
Approach LOS								A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	65	0	762	805	8
Future Volume (vph)	0	65	0	762	805	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.998	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3571	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3571	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	71	0	828	875	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	71	0	828	884	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

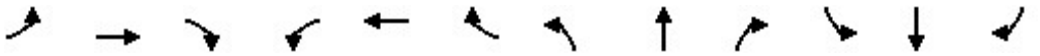
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	65	0	762	805	8
Future Volume (Veh/h)	0	65	0	762	805	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	71	0	828	875	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.91	0.87	0.87			
vC, conflicting volume	1294	442	884			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	688	46	556			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	346	878	875			

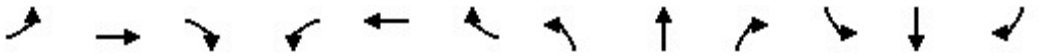
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	71	414	414	583	301
Volume Left	0	0	0	0	0
Volume Right	71	0	0	0	9
cSH	878	1700	1700	1700	1700
Volume to Capacity	0.08	0.24	0.24	0.34	0.18
Queue Length 95th (m)	2.0	0.0	0.0	0.0	0.0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.5	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	33.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	13	0	26	0	0	0	43	0	0
Future Volume (vph)	0	0	0	13	0	26	0	0	0	43	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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					0.910							
Flt Protected					0.984						0.950	
Satd. Flow (prot)	0	1883	0	0	1687	0	0	1883	0	0	1789	0
Flt Permitted					0.984						0.950	
Satd. Flow (perm)	0	1883	0	0	1687	0	0	1883	0	0	1789	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	14	0	28	0	0	0	47	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	42	0	0	0	0	0	47	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	21	0	14	0	0	0	101	0	0
Future Volume (Veh/h)	0	0	0	21	0	14	0	0	0	101	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	23	0	15	0	0	0	110	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	235	220	0	220	220	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	235	220	0	220	220	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	97	100	99	100			93		
cM capacity (veh/h)	673	632	1085	698	632	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	38	0	110
Volume Left	0	23	0	110
Volume Right	0	15	0	0
cSH	1700	812	1700	1623
Volume to Capacity	0.09	0.05	0.00	0.07
Queue Length 95th (m)	0.0	1.1	0.0	1.7
Control Delay (s)	0.0	9.6	0.0	7.4
Lane LOS	A	A		A
Approach Delay (s)	0.0	9.6	0.0	7.4
Approach LOS	A	A		

Intersection Summary				
Average Delay	8.0			
Intersection Capacity Utilization	15.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	0	101	43	0	14
Future Volume (vph)	25	0	101	43	0	14
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					0.865	
Flt Protected				0.966		
Satd. Flow (prot)	1883	0	0	1819	1629	0
Flt Permitted				0.966		
Satd. Flow (perm)	1883	0	0	1819	1629	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	0	110	47	0	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	157	15	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	101	43	0	14
Future Volume (Veh/h)	25	0	101	43	0	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	0	110	47	0	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked					0.96	
vC, conflicting volume			27		294	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		244	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	99
cM capacity (veh/h)			1587		665	1048

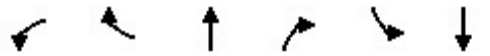
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	27	157	15
Volume Left	0	110	0
Volume Right	0	0	15
cSH	1700	1587	1048
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (m)	0.0	1.7	0.3
Control Delay (s)	0.0	5.4	8.5
Lane LOS		A	A
Approach Delay (s)	0.0	5.4	8.5
Approach LOS			A

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	0	4	0	0	18
Future Volume (vph)	21	0	4	0	0	18
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)	1789	0	1883	0	0	1883
Flt Permitted	0.950					
Satd. Flow (perm)	1789	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	0	4	0	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	4	0	0	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	0	4	0	0	18
Future Volume (Veh/h)	21	0	4	0	0	18
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	0	4	0	0	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	24	4			4	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	24	4			4	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	992	1080			1618	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	4	20
Volume Left	23	0	0
Volume Right	0	0	0
cSH	992	1700	1618
Volume to Capacity	0.02	0.00	0.00
Queue Length 95th (m)	0.5	0.0	0.0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	0	0	43	0	0
Future Volume (vph)	25	0	0	43	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	0	0	47	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	47	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	0	43	0	0
Future Volume (Veh/h)	25	0	0	43	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	0	0	47	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			27		74	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		74	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1587		930	1048

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	27	47	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1587	1700
Volume to Capacity	0.02	0.00	0.12
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	21	0	0
Future Volume (vph)	0	0	0	21	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	23	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	23	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	21	0	0
Future Volume (Veh/h)	0	0	0	21	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	23	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		23	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		23	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		993	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	23	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1623	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

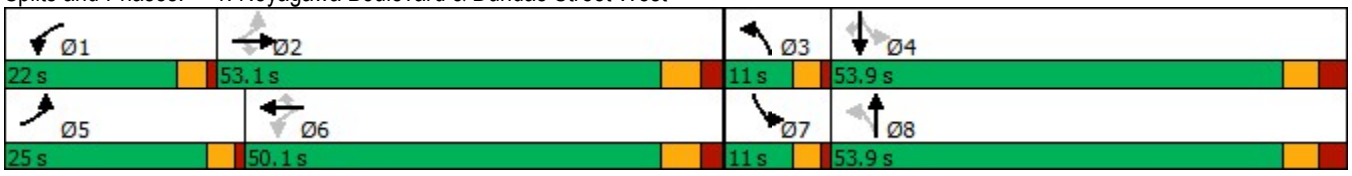
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Future Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1617	1825	4476	1541	1789	3485	0	1807	3579	1585
Flt Permitted	0.085			0.159			0.455			0.204		
Satd. Flow (perm)	160	4433	1588	305	4476	1521	856	3485	0	385	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			236			93		22				304
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	377	1040	244	295	1709	135	317	509	119	121	363	469
Shared Lane Traffic (%)												
Lane Group Flow (vph)	377	1040	244	295	1709	135	317	628	0	121	363	469
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	25.0	53.1	53.1	22.0	50.1	50.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.9%	37.9%	37.9%	15.7%	35.8%	35.8%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	21.0	46.4	46.4	18.0	43.4	43.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	70.5	47.2	47.2	63.6	43.5	43.5	37.6	27.6		37.6	27.6	27.6
Actuated g/C Ratio	0.58	0.39	0.39	0.53	0.36	0.36	0.31	0.23		0.31	0.23	0.23
v/c Ratio	1.00	0.60	0.32	0.78	1.06	0.22	0.99	0.77		0.60	0.44	0.79
Control Delay	82.7	32.2	5.1	36.1	78.5	11.6	86.5	48.8		41.0	41.3	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	82.7	32.2	5.1	36.1	78.5	11.6	86.5	48.8		41.0	41.3	25.3
LOS	F	C	A	D	E	B	F	D		D	D	C
Approach Delay		39.7			68.4			61.4			33.4	
Approach LOS		D			E			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 120.9			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 53.0		Intersection LOS: D	
Intersection Capacity Utilization 105.1%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	377	1040	244	295	1709	135	317	628	121	363	469
v/c Ratio	1.00	0.60	0.32	0.78	1.06	0.22	0.99	0.77	0.60	0.44	0.79
Control Delay	82.7	32.2	5.1	36.1	78.5	11.6	86.5	48.8	41.0	41.3	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	32.2	5.1	36.1	78.5	11.6	86.5	48.8	41.0	41.3	25.3
Queue Length 50th (m)	72.4	80.4	1.1	35.2	~182.7	6.4	~59.6	71.3	20.0	39.0	37.8
Queue Length 95th (m)	#157.8	114.4	18.9	#91.3	#255.5	22.8	#102.9	90.8	33.6	52.6	77.9
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	376	1731	764	388	1610	606	320	1371	202	1395	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.60	0.32	0.76	1.06	0.22	0.99	0.46	0.60	0.26	0.59

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Future Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1589	1825	4476	1521	1788	3486		1805	3579	1563
Flt Permitted	0.08	1.00	1.00	0.16	1.00	1.00	0.45	1.00		0.20	1.00	1.00
Satd. Flow (perm)	160	4433	1589	306	4476	1521	856	3486		387	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	377	1040	244	295	1709	135	317	509	119	121	362	469
RTOR Reduction (vph)	0	0	144	0	0	60	0	17	0	0	0	234
Lane Group Flow (vph)	377	1040	100	295	1709	75	317	611	0	121	363	235
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	68.3	47.2	47.2	60.9	43.5	43.5	34.7	27.7		34.7	27.7	27.7
Effective Green, g (s)	68.3	47.2	47.2	60.9	43.5	43.5	34.7	27.7		34.7	27.7	27.7
Actuated g/C Ratio	0.56	0.39	0.39	0.50	0.36	0.36	0.29	0.23		0.29	0.23	0.23
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	374	1730	620	372	1610	547	299	798		193	820	358
v/s Ratio Prot	c0.18	0.23		0.11	0.38		c0.06	0.18		0.04	0.10	
v/s Ratio Perm	c0.39		0.06	0.29		0.05	c0.24			0.14		0.15
v/c Ratio	1.01	0.60	0.16	0.79	1.06	0.14	1.06	0.77		0.63	0.44	0.66
Uniform Delay, d1	39.0	29.4	24.0	19.9	38.7	26.1	41.9	43.6		33.9	40.0	42.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	48.6	0.6	0.1	11.0	40.8	0.1	68.8	4.4		6.2	0.4	4.3
Delay (s)	87.6	29.9	24.1	31.0	79.5	26.2	110.8	48.0		40.1	40.4	46.6
Level of Service	F	C	C	C	E	C	F	D		D	D	D
Approach Delay (s)		42.2			69.4			69.0			43.4	
Approach LOS		D			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	57.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.9	Sum of lost time (s)	21.6
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		

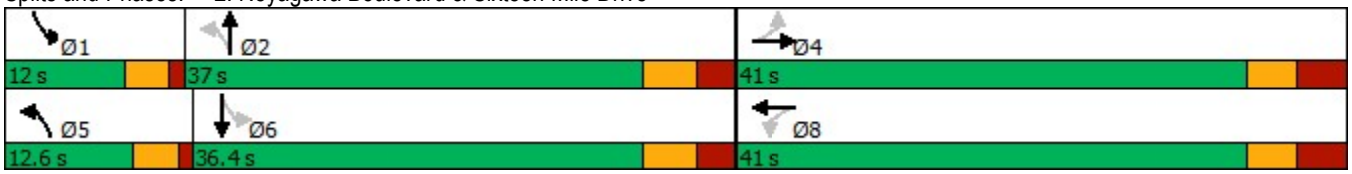
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	4	17	259	5	62	137	560	194	109	621	2
Future Volume (vph)	18	4	17	259	5	62	137	560	194	109	621	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99		1.00		
Frt		0.941			0.974			0.961				
Flt Protected		0.977			0.962		0.950			0.950		
Satd. Flow (prot)	0	1756	0	0	1772	0	1825	3419	0	1825	3579	0
Flt Permitted		0.805			0.742		0.284			0.267		
Satd. Flow (perm)	0	1447	0	0	1366	0	546	3419	0	512	3579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			15			58				
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	19	4	18	278	5	67	147	602	209	117	668	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	350	0	147	811	0	117	670	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		12.6	37.0		12.0	36.4	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		14.0%	41.1%		13.3%	40.4%	
Maximum Green (s)	34.2	34.2		34.2	34.2		8.6	30.7		8.0	30.1	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		22.8			22.8		35.9	27.1		33.9	23.9	
Actuated g/C Ratio		0.31			0.31		0.50	0.37		0.47	0.33	
v/c Ratio		0.09			0.80		0.35	0.62		0.31	0.57	
Control Delay		12.3			36.3		12.9	21.7		12.7	23.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		12.3			36.3		12.9	21.7		12.7	23.3	
LOS		B			D		B	C		B	C	
Approach Delay		12.3			36.3			20.3			21.7	
Approach LOS		B			D			C			C	

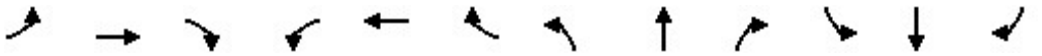
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 72.4			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 23.3		Intersection LOS: C	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	41	350	147	811	117	670
v/c Ratio	0.09	0.80	0.35	0.62	0.31	0.57
Control Delay	12.3	36.3	12.9	21.7	12.7	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	36.3	12.9	21.7	12.7	23.3
Queue Length 50th (m)	2.1	39.3	9.4	45.5	7.3	39.0
Queue Length 95th (m)	8.8	77.9	23.5	77.7	19.3	66.3
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	712	671	428	1527	392	1530
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.52	0.34	0.53	0.30	0.44

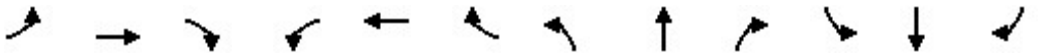
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	4	17	259	5	62	137	560	194	109	621	2
Future Volume (vph)	18	4	17	259	5	62	137	560	194	109	621	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.97		1.00	0.96		1.00	1.00	
Flt Protected		0.98			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1756			1771		1825	3422		1824	3577	
Flt Permitted		0.81			0.74		0.28	1.00		0.27	1.00	
Satd. Flow (perm)		1447			1367		545	3422		513	3577	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	19	4	18	278	5	67	147	602	209	117	668	2
RTOR Reduction (vph)	0	12	0	0	10	0	0	36	0	0	0	0
Lane Group Flow (vph)	0	29	0	0	340	0	147	775	0	117	670	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.8			22.8		35.3	27.1		30.7	24.8	
Effective Green, g (s)		22.8			22.8		35.3	27.1		30.7	24.8	
Actuated g/C Ratio		0.31			0.31		0.48	0.37		0.42	0.34	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		452			427		407	1272		322	1216	
v/s Ratio Prot							c0.04	c0.23		0.03	0.19	
v/s Ratio Perm		0.02			c0.25		0.13			0.12		
v/c Ratio		0.06			0.80		0.36	0.61		0.36	0.55	
Uniform Delay, d1		17.6			22.9		11.1	18.6		13.3	19.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			9.9		0.5	0.8		0.7	0.5	
Delay (s)		17.6			32.8		11.6	19.4		14.0	20.1	
Level of Service		B			C		B	B		B	C	
Approach Delay (s)		17.6			32.8			18.2			19.2	
Approach LOS		B			C			B			B	

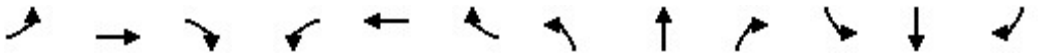
Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	72.9	Sum of lost time (s)	17.1
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	25	18	0	47	0	0	4	0	0	0	0
Future Volume (vph)	0	25	18	0	47	0	0	4	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.943										
Flt Protected												
Satd. Flow (prot)	0	1776	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1776	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	20	0	51	0	0	4	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	51	0	0	4	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

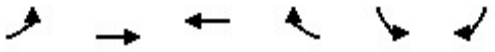
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	25	18	0	47	0	0	4	0	0	0	0
Future Volume (Veh/h)	0	25	18	0	47	0	0	4	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	20	0	51	0	0	4	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	51			47			88	88	37	90	98	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51			47			88	88	37	90	98	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1555			1560			897	802	1035	891	792	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	47	51	4	0
Volume Left	0	0	0	0
Volume Right	20	0	0	0
cSH	1555	1560	802	1700
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.1	0.0
Control Delay (s)	0.0	0.0	9.5	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	9.5	0.0
Approach LOS			A	A

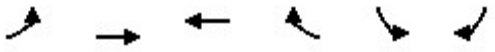
Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1595	2391	4	0	39
Future Volume (vph)	0	1595	2391	4	0	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1601	0	1629
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1734	2599	4	0	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1734	2599	4	0	42
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1595	2391	4	0	39
Future Volume (Veh/h)	0	1595	2391	4	0	39
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1734	2599	4	0	42
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.66				0.66	0.66
vC, conflicting volume	2603				3177	866
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1622				2493	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	94
cM capacity (veh/h)	262				16	715

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	578	578	578	866	866	866	4	42
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	4	42
cSH	1700	1700	1700	1700	1700	1700	1700	715
Volume to Capacity	0.34	0.34	0.34	0.51	0.51	0.51	0.00	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4
Lane LOS								B
Approach Delay (s)	0.0			0.0				10.4
Approach LOS								B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	58	0	983	877	25
Future Volume (vph)	0	58	0	983	877	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.996	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3564	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3564	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	63	0	1068	953	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	63	0	1068	980	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

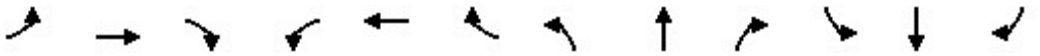
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	58	0	983	877	25
Future Volume (Veh/h)	0	58	0	983	877	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	63	0	1068	953	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.92	0.85	0.85			
vC, conflicting volume	1500	490	980			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	646	45	622			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	374	863	811			

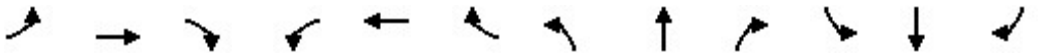
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	63	534	534	635	345
Volume Left	0	0	0	0	0
Volume Right	63	0	0	0	27
cSH	863	1700	1700	1700	1700
Volume to Capacity	0.07	0.31	0.31	0.37	0.20
Queue Length 95th (m)	1.8	0.0	0.0	0.0	0.0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.5	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	21	0	14	0	0	0	101	0	0
Future Volume (vph)	0	0	0	21	0	14	0	0	0	101	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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					0.947							
Flt Protected					0.971						0.950	
Satd. Flow (prot)	0	1883	0	0	1732	0	0	1883	0	0	1789	0
Flt Permitted					0.971						0.950	
Satd. Flow (perm)	0	1883	0	0	1732	0	0	1883	0	0	1789	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	23	0	15	0	0	0	110	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	38	0	0	0	0	0	110	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	21	0	14	0	0	0	101	0	0
Future Volume (Veh/h)	0	0	0	21	0	14	0	0	0	101	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	23	0	15	0	0	0	110	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	235	220	0	220	220	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	235	220	0	220	220	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	97	100	99	100			93		
cM capacity (veh/h)	673	632	1085	698	632	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	38	0	110
Volume Left	0	23	0	110
Volume Right	0	15	0	0
cSH	1700	812	1700	1623
Volume to Capacity	0.09	0.05	0.00	0.07
Queue Length 95th (m)	0.0	1.1	0.0	1.7
Control Delay (s)	0.0	9.6	0.0	7.4
Lane LOS	A	A		A
Approach Delay (s)	0.0	9.6	0.0	7.4
Approach LOS	A	A		

Intersection Summary				
Average Delay	8.0			
Intersection Capacity Utilization	15.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	0	101	43	0	14
Future Volume (vph)	25	0	101	43	0	14
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					0.865	
Flt Protected				0.966		
Satd. Flow (prot)	1883	0	0	1819	1629	0
Flt Permitted				0.966		
Satd. Flow (perm)	1883	0	0	1819	1629	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	0	110	47	0	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	157	15	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

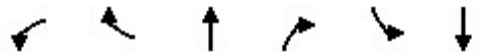
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	101	43	0	14
Future Volume (Veh/h)	25	0	101	43	0	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	0	110	47	0	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked					0.96	
vC, conflicting volume			27		294	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		244	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	99
cM capacity (veh/h)			1587		665	1048

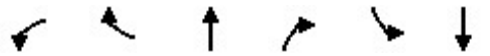
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	27	157	15
Volume Left	0	110	0
Volume Right	0	0	15
cSH	1700	1587	1048
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (m)	0.0	1.7	0.3
Control Delay (s)	0.0	5.4	8.5
Lane LOS		A	A
Approach Delay (s)	0.0	5.4	8.5
Approach LOS			A

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	0	4	0	0	18
Future Volume (vph)	21	0	4	0	0	18
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)	1789	0	1883	0	0	1883
Flt Permitted	0.950					
Satd. Flow (perm)	1789	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	0	4	0	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	4	0	0	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	0	4	0	0	18
Future Volume (Veh/h)	21	0	4	0	0	18
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	0	4	0	0	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	24	4			4	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	24	4			4	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	992	1080			1618	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	4	20
Volume Left	23	0	0
Volume Right	0	0	0
cSH	992	1700	1618
Volume to Capacity	0.02	0.00	0.00
Queue Length 95th (m)	0.5	0.0	0.0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	0	0	43	0	0
Future Volume (vph)	25	0	0	43	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	0	0	47	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	47	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	0	43	0	0
Future Volume (Veh/h)	25	0	0	43	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	0	0	47	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			27		74	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		74	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1587		930	1048

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	27	47	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1587	1700
Volume to Capacity	0.02	0.00	0.12
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	21	0	0
Future Volume (vph)	0	0	0	21	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	23	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	23	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

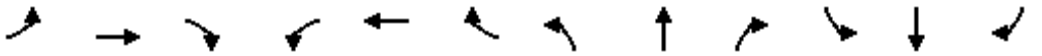
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	21	0	0
Future Volume (Veh/h)	0	0	0	21	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	23	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		23	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		23	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		993	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	23	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1623	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

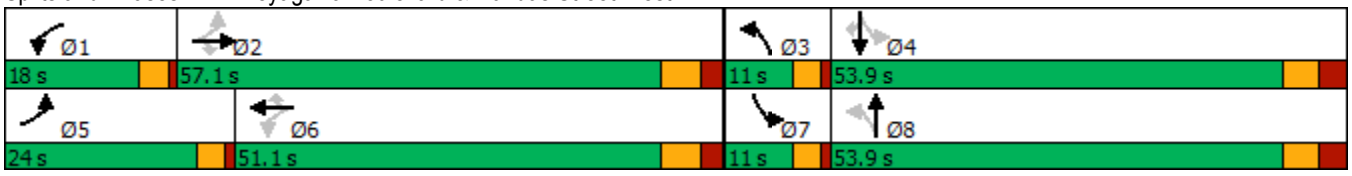


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Future Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1601	1807	4269	1555	1738	3416	0	1755	3476	1585
Flt Permitted	0.119			0.104			0.503			0.361		
Satd. Flow (perm)	224	4433	1571	198	4269	1534	919	3416	0	665	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199			124		25				291
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	388	1425	271	251	1053	46	278	345	90	107	319	430
Shared Lane Traffic (%)												
Lane Group Flow (vph)	388	1425	271	251	1053	46	278	435	0	107	319	430
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	24.0	57.1	57.1	18.0	51.1	51.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.1%	40.8%	40.8%	12.9%	36.5%	36.5%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	20.0	50.4	50.4	14.0	44.4	44.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	65.7	44.6	44.6	55.5	38.5	38.5	31.3	21.2		31.3	21.2	21.2
Actuated g/C Ratio	0.60	0.41	0.41	0.51	0.35	0.35	0.29	0.19		0.29	0.19	0.19
v/c Ratio	0.91	0.79	0.36	0.81	0.70	0.07	0.88	0.64		0.41	0.47	0.80
Control Delay	53.7	32.4	8.2	47.9	33.6	0.2	62.8	42.5		32.5	41.5	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	53.7	32.4	8.2	47.9	33.6	0.2	62.8	42.5		32.5	41.5	25.6
LOS	D	C	A	D	C	A	E	D		C	D	C
Approach Delay		33.2			35.2			50.4			32.4	
Approach LOS		C			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 109.1			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 36.1		Intersection LOS: D	
Intersection Capacity Utilization 85.0%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	388	1425	271	251	1053	46	278	435	107	319	430
v/c Ratio	0.91	0.79	0.36	0.81	0.70	0.07	0.88	0.64	0.41	0.47	0.80
Control Delay	53.7	32.4	8.2	47.9	33.6	0.2	62.8	42.5	32.5	41.5	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	32.4	8.2	47.9	33.6	0.2	62.8	42.5	32.5	41.5	25.6
Queue Length 50th (m)	57.9	102.7	8.9	33.4	75.8	0.0	49.2	43.8	16.9	32.8	29.1
Queue Length 95th (m)	#145.4	155.6	31.5	#94.2	115.0	0.0	#79.1	60.9	30.4	47.2	67.7
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	426	2079	842	310	1764	706	316	1508	261	1520	847
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.69	0.32	0.81	0.60	0.07	0.88	0.29	0.41	0.21	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Future Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1573	1807	4269	1534	1737	3417		1754	3476	1564
Flt Permitted	0.12	1.00	1.00	0.10	1.00	1.00	0.50	1.00		0.36	1.00	1.00
Satd. Flow (perm)	224	4433	1573	197	4269	1534	920	3417		666	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	388	1425	271	251	1053	46	278	345	90	107	319	430
RTOR Reduction (vph)	0	0	117	0	0	30	0	20	0	0	0	234
Lane Group Flow (vph)	388	1425	154	251	1053	16	278	415	0	107	319	196
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	62.9	44.7	44.7	52.8	38.6	38.6	28.3	21.2		28.3	21.2	21.2
Effective Green, g (s)	62.9	44.7	44.7	52.8	38.6	38.6	28.3	21.2		28.3	21.2	21.2
Actuated g/C Ratio	0.58	0.41	0.41	0.49	0.35	0.35	0.26	0.19		0.26	0.19	0.19
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	421	1821	646	305	1514	544	292	665		244	677	304
v/s Ratio Prot	c0.17	0.32		0.11	0.25		c0.06	0.12		0.03	0.09	
v/s Ratio Perm	c0.36		0.10	0.29		0.01	c0.19			0.09		0.13
v/c Ratio	0.92	0.78	0.24	0.82	0.70	0.03	0.95	0.62		0.44	0.47	0.64
Uniform Delay, d1	28.3	27.8	20.9	25.8	30.1	22.9	38.2	40.1		31.9	38.8	40.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	25.5	2.3	0.2	16.2	1.4	0.0	39.7	1.8		1.3	0.5	4.6
Delay (s)	53.7	30.1	21.1	42.1	31.5	22.9	77.9	42.0		33.2	39.4	44.9
Level of Service	D	C	C	D	C	C	E	D		C	D	D
Approach Delay (s)		33.3			33.1			56.0			41.4	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	108.8	Sum of lost time (s)	21.6
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

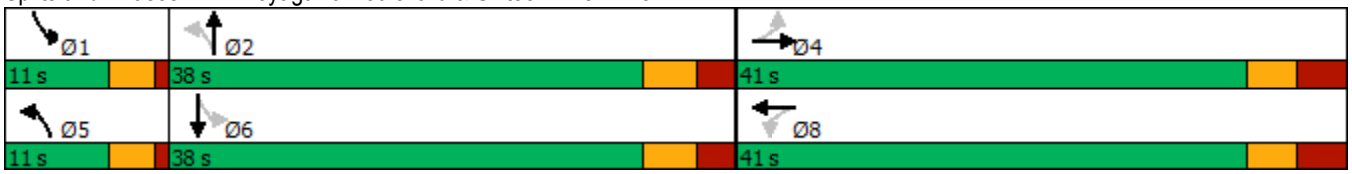
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	18	177	1	62	19	614	109	39	647	3
Future Volume (vph)	1	0	18	177	1	62	19	614	109	39	647	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			1.00		1.00		
Frt		0.872			0.965			0.977			0.999	
Flt Protected		0.997			0.964		0.950			0.950		
Satd. Flow (prot)	0	1650	0	0	1670	0	1722	3439	0	1601	3541	0
Flt Permitted		0.981			0.770		0.386			0.304		
Satd. Flow (perm)	0	1623	0	0	1333	0	700	3439	0	511	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			22			25			1	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Adj. Flow (vph)	1	0	18	181	1	63	19	627	111	40	660	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	245	0	19	738	0	40	663	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		6.5	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.0	30.3		11.0	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		11.0	38.0		11.0	38.0	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		12.2%	42.2%		12.2%	42.2%	
Maximum Green (s)	34.2	34.2		34.2	34.2		7.0	31.7		7.0	31.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		16.0			16.0		27.4	22.7		28.0	24.6	
Actuated g/C Ratio		0.29			0.29		0.49	0.41		0.50	0.44	
v/c Ratio		0.04			0.62		0.04	0.52		0.10	0.43	
Control Delay		0.1			24.3		8.4	15.8		8.7	13.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.1			24.3		8.4	15.8		8.7	13.4	
LOS		A			C		A	B		A	B	
Approach Delay		0.1			24.3			15.6			13.2	
Approach LOS		A			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 56			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 60.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive



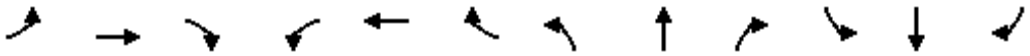
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	245	19	738	40	663
v/c Ratio	0.04	0.62	0.04	0.52	0.10	0.43
Control Delay	0.1	24.3	8.4	15.8	8.7	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	24.3	8.4	15.8	8.7	13.4
Queue Length 50th (m)	0.0	15.3	0.8	22.6	1.8	20.5
Queue Length 95th (m)	0.0	48.4	4.1	61.6	7.0	55.6
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	1079	869	477	2069	399	2133
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.28	0.04	0.36	0.10	0.31

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	18	177	1	62	19	614	109	39	647	3
Future Volume (vph)	1	0	18	177	1	62	19	614	109	39	647	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.87			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1670		1722	3442		1600	3542	
Flt Permitted		0.98			0.77		0.39	1.00		0.30	1.00	
Satd. Flow (perm)		1624			1334		700	3442		512	3542	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	0	18	181	1	63	19	627	111	40	660	3
RTOR Reduction (vph)	0	14	0	0	16	0	0	15	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	229	0	19	723	0	40	662	0
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.0			16.0		24.5	23.5		26.7	24.6	
Effective Green, g (s)		16.0			16.0		24.5	23.5		26.7	24.6	
Actuated g/C Ratio		0.27			0.27		0.42	0.40		0.45	0.42	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		442			363		309	1377		271	1484	
v/s Ratio Prot							0.00	c0.21		c0.01	0.19	
v/s Ratio Perm		0.00			c0.17		0.02			0.06		
v/c Ratio		0.01			0.63		0.06	0.53		0.15	0.45	
Uniform Delay, d1		15.6			18.8		10.1	13.4		9.1	12.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			3.6		0.1	0.4		0.3	0.2	
Delay (s)		15.6			22.3		10.2	13.7		9.4	12.4	
Level of Service		B			C		B	B		A	B	
Approach Delay (s)		15.6			22.3			13.6			12.2	
Approach LOS		B			C			B			B	

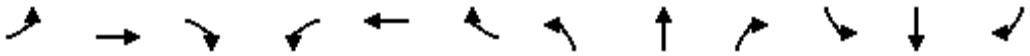
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	17.1
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	19	0	0	23	0	0	0	0	0	0	0
Future Volume (vph)	0	19	0	0	23	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	0	0	25	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	25	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

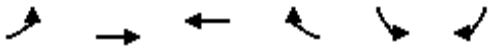
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	0	0	23	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	19	0	0	23	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	21	0	0	25	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	25			21			46	46	21	46	46	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			21			46	46	21	46	46	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1589			1595			955	846	1056	955	846	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	25	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1589	1595	1700	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS			A	A

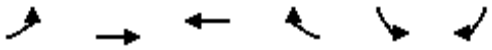
Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	2001	1692	0	0	0
Future Volume (vph)	0	2001	1692	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1883	0	1883
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1883	0	1883
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2175	1839	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2175	1839	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

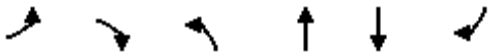
* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	2001	1692	0	0	0
Future Volume (Veh/h)	0	2001	1692	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2175	1839	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	1839				2564	613
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1214				2109	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	462				36	878

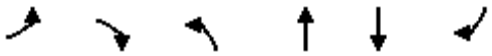
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	725	725	725	613	613	613	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.43	0.43	0.43	0.36	0.36	0.36	0.02	0.11
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								A
Approach Delay (s)	0.0			0.0				0.0
Approach LOS								A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	748	846	0
Future Volume (vph)	0	0	0	748	846	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	1883	0	3579	3579	0
Flt Permitted						
Satd. Flow (perm)	0	1883	0	3579	3579	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	813	920	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	813	920	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

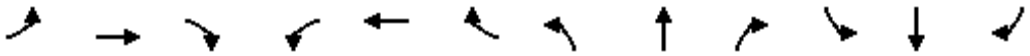
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	748	846	0
Future Volume (Veh/h)	0	0	0	748	846	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	813	920	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.91	0.87	0.87			
vC, conflicting volume	1326	460	920			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	724	79	608			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	330	840	840			

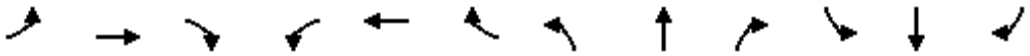
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	406	406	613	307
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.24	0.24	0.36	0.18
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.12	0.05	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	19	0	0	23	0	0
Future Volume (vph)	19	0	0	23	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	25	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	23	0	0
Future Volume (Veh/h)	19	0	0	23	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	25	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			21		46	21
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		46	21
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1595		964	1056

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	25	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1595	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	1883	0	0	1883
Flt Permitted						
Satd. Flow (perm)	1883	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.04	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	19	0	0	23	0	0
Future Volume (vph)	19	0	0	23	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	25	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	23	0	0
Future Volume (Veh/h)	19	0	0	23	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	25	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			21		46	21
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		46	21
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1595		964	1056

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	25	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1595	1700
Volume to Capacity	0.01	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

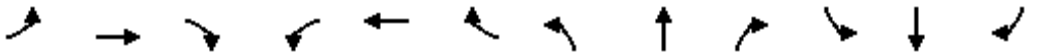
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1023	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.01	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

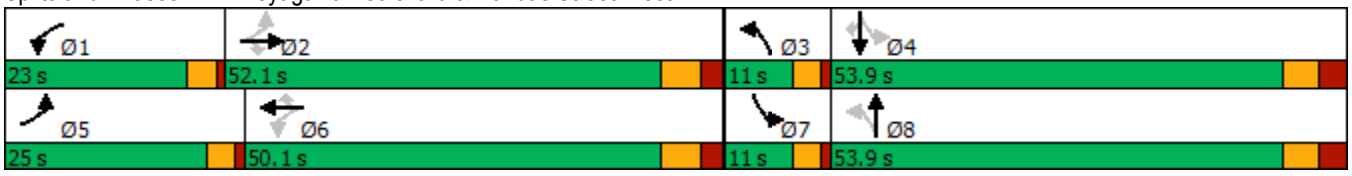


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Future Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1617	1825	4476	1541	1789	3477	0	1807	3579	1585
Flt Permitted	0.088			0.133			0.458			0.209		
Satd. Flow (perm)	166	4433	1588	255	4476	1521	861	3477	0	395	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			232			93		24				314
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	370	1082	253	306	1771	83	329	500	124	101	361	484
Shared Lane Traffic (%)												
Lane Group Flow (vph)	370	1082	253	306	1771	83	329	624	0	101	361	484
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	25.0	52.1	52.1	23.0	50.1	50.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.9%	37.2%	37.2%	16.4%	35.8%	35.8%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	21.0	45.4	45.4	19.0	43.4	43.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	69.4	45.6	45.6	65.3	43.6	43.6	37.9	28.0		37.9	28.0	28.0
Actuated g/C Ratio	0.57	0.38	0.38	0.54	0.36	0.36	0.31	0.23		0.31	0.23	0.23
v/c Ratio	0.98	0.65	0.34	0.80	1.10	0.14	1.02	0.76		0.49	0.44	0.81
Control Delay	78.0	34.5	6.3	41.5	93.0	5.4	93.6	48.0		35.6	41.1	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	78.0	34.5	6.3	41.5	93.0	5.4	93.6	48.0		35.6	41.1	25.7
LOS	E	C	A	D	F	A	F	D		D	D	C
Approach Delay		39.7			82.3			63.7			32.6	
Approach LOS		D			F			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 121.3			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 58.5		Intersection LOS: E	
Intersection Capacity Utilization 105.2%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	370	1082	253	306	1771	83	329	624	101	361	484
v/c Ratio	0.98	0.65	0.34	0.80	1.10	0.14	1.02	0.76	0.49	0.44	0.81
Control Delay	78.0	34.5	6.3	41.5	93.0	5.4	93.6	48.0	35.6	41.1	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.0	34.5	6.3	41.5	93.0	5.4	93.6	48.0	35.6	41.1	25.7
Queue Length 50th (m)	69.9	85.7	3.1	43.6	~194.7	0.0	~65.8	70.4	16.5	38.7	39.6
Queue Length 95th (m)	#157.0	124.7	22.8	#107.2	#276.2	9.6	#108.0	89.6	28.4	52.3	80.5
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	376	1666	741	384	1607	605	322	1367	205	1391	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.65	0.34	0.80	1.10	0.14	1.02	0.46	0.49	0.26	0.61

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Future Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1589	1825	4476	1521	1788	3479		1805	3579	1563
Flt Permitted	0.09	1.00	1.00	0.13	1.00	1.00	0.46	1.00		0.21	1.00	1.00
Satd. Flow (perm)	165	4433	1589	256	4476	1521	861	3479		397	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	370	1082	253	306	1771	83	329	500	124	101	361	484
RTOR Reduction (vph)	0	0	145	0	0	53	0	18	0	0	0	242
Lane Group Flow (vph)	370	1082	108	306	1771	30	329	606	0	101	361	242
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	66.7	45.6	45.6	62.7	43.6	43.6	35.0	28.0		35.0	28.0	28.0
Effective Green, g (s)	66.7	45.6	45.6	62.7	43.6	43.6	35.0	28.0		35.0	28.0	28.0
Actuated g/C Ratio	0.55	0.38	0.38	0.52	0.36	0.36	0.29	0.23		0.29	0.23	0.23
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	373	1666	597	379	1608	546	301	803		195	826	360
v/s Ratio Prot	c0.17	0.24		0.13	c0.40		c0.06	0.17		0.03	0.10	
v/s Ratio Perm	0.37		0.07	0.29		0.02	c0.25			0.12		0.16
v/c Ratio	0.99	0.65	0.18	0.81	1.10	0.05	1.09	0.75		0.52	0.44	0.67
Uniform Delay, d1	38.7	31.3	25.3	24.9	38.8	25.4	42.0	43.4		33.4	39.9	42.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	44.3	0.9	0.1	11.9	55.6	0.0	79.1	4.0		2.3	0.4	4.9
Delay (s)	83.0	32.1	25.5	36.8	94.4	25.4	121.0	47.5		35.8	40.3	47.4
Level of Service	F	C	C	D	F	C	F	D		D	D	D
Approach Delay (s)		42.2			83.6			72.9			43.4	
Approach LOS		D			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	63.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	21.6
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

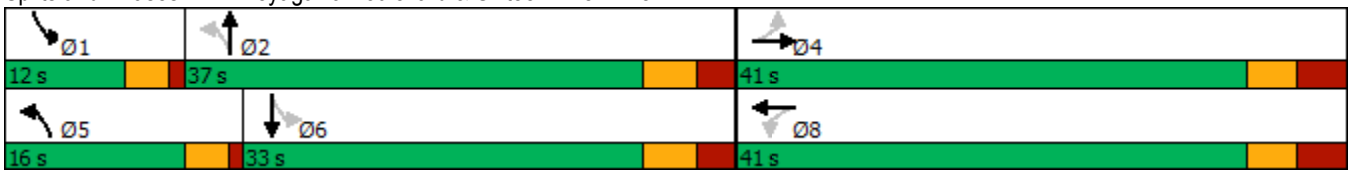
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	269	5	63	40	582	198	111	620	2
Future Volume (vph)	4	4	35	269	5	63	40	582	198	111	620	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99		1.00		
Frt		0.888			0.975			0.962				
Flt Protected		0.996			0.962		0.950			0.950		
Satd. Flow (prot)	0	1681	0	0	1774	0	1825	3423	0	1825	3579	0
Flt Permitted		0.964			0.738		0.358			0.206		
Satd. Flow (perm)	0	1627	0	0	1360	0	688	3423	0	395	3579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			15			56				
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	4	4	38	289	5	68	43	626	213	119	667	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	362	0	43	839	0	119	669	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		16.0	37.0		12.0	33.0	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		17.8%	41.1%		13.3%	36.7%	
Maximum Green (s)	34.2	34.2		34.2	34.2		12.0	30.7		8.0	26.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		23.8			23.8		32.9	25.1		34.6	28.0	
Actuated g/C Ratio		0.33			0.33		0.46	0.35		0.48	0.39	
v/c Ratio		0.08			0.79		0.10	0.68		0.34	0.48	
Control Delay		8.0			34.8		11.1	23.4		13.5	20.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		8.0			34.8		11.1	23.4		13.5	20.1	
LOS		A			C		B	C		B	C	
Approach Delay		8.0			34.8			22.8			19.1	
Approach LOS		A			C			C			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 71.5
Natural Cycle: 85
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 68.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





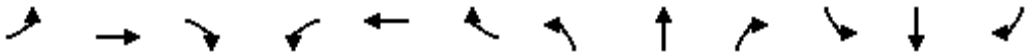
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	362	43	839	119	669
v/c Ratio	0.08	0.79	0.10	0.68	0.34	0.48
Control Delay	8.0	34.8	11.1	23.4	13.5	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	34.8	11.1	23.4	13.5	20.1
Queue Length 50th (m)	0.7	42.4	2.7	49.4	7.8	38.6
Queue Length 95th (m)	7.4	81.4	8.7	81.5	19.4	65.3
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	842	695	551	1585	360	1524
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.52	0.08	0.53	0.33	0.44

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	269	5	63	40	582	198	111	620	2
Future Volume (vph)	4	4	35	269	5	63	40	582	198	111	620	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.89			0.97		1.00	0.96		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1682			1771		1825	3425		1824	3577	
Flt Permitted		0.96			0.74		0.36	1.00		0.21	1.00	
Satd. Flow (perm)		1628			1359		688	3425		395	3577	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	4	38	289	5	68	43	626	213	119	667	2
RTOR Reduction (vph)	0	26	0	0	10	0	0	36	0	0	0	0
Lane Group Flow (vph)	0	20	0	0	352	0	43	803	0	119	669	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.8			23.8		29.8	26.0		33.8	28.0	
Effective Green, g (s)		23.8			23.8		29.8	26.0		33.8	28.0	
Actuated g/C Ratio		0.33			0.33		0.41	0.36		0.46	0.39	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		532			444		341	1224		297	1377	
v/s Ratio Prot							0.01	c0.23		c0.03	0.19	
v/s Ratio Perm		0.01			c0.26		0.05			0.15		
v/c Ratio		0.04			0.79		0.13	0.66		0.40	0.49	
Uniform Delay, d1		16.7			22.2		13.0	19.6		12.1	16.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			9.4		0.2	1.3		0.9	0.3	
Delay (s)		16.7			31.6		13.2	20.9		13.0	17.2	
Level of Service		B			C		B	C		B	B	
Approach Delay (s)		16.7			31.6			20.5			16.5	
Approach LOS		B			C			C			B	

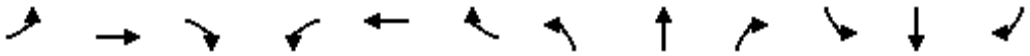
Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	17.1
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	43	0	0	47	0	0	0	0	0	0	0
Future Volume (vph)	0	43	0	0	47	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	47	0	0	51	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	51	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

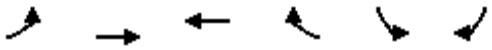
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	43	0	0	47	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	43	0	0	47	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	47	0	0	51	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	51			47			98	98	47	98	98	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51			47			98	98	47	98	98	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1555			1560			884	792	1022	884	792	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	47	51	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1555	1560	1700	1700
Volume to Capacity	0.00	0.00	0.04	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS			A	A

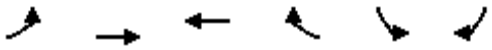
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1638	2482	0	0	0
Future Volume (vph)	0	1638	2482	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1883	0	1883
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1883	0	1883
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1780	2698	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1780	2698	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

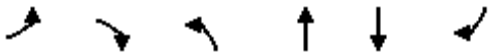
* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1638	2482	0	0	0
Future Volume (Veh/h)	0	1638	2482	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1780	2698	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.66				0.66	0.66
vC, conflicting volume	2698				3291	899
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1767				2667	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	230				12	715

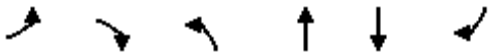
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	593	593	593	899	899	899	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.35	0.35	0.35	0.53	0.53	0.53	0.06	0.18
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								A
Approach Delay (s)	0.0			0.0				0.0
Approach LOS								A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	917	931	0
Future Volume (vph)	0	0	0	917	931	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	1883	0	3579	3579	0
Flt Permitted						
Satd. Flow (perm)	0	1883	0	3579	3579	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	997	1012	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	997	1012	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

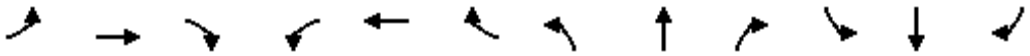
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	917	931	0
Future Volume (Veh/h)	0	0	0	917	931	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	997	1012	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.92	0.86	0.86			
vC, conflicting volume	1510	506	1012			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	701	100	688			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	344	805	775			

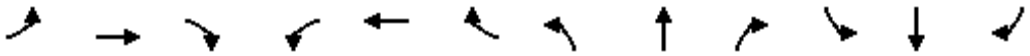
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	498	498	675	337
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.29	0.29	0.40	0.20
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.09	0.06	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	47	0	0
Future Volume (vph)	43	0	0	47	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	0	51	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	51	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	0	47	0	0
Future Volume (Veh/h)	43	0	0	47	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	0	51	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			47		98	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		98	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1560		901	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	51	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1560	1700
Volume to Capacity	0.03	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	1883	0	0	1883
Flt Permitted						
Satd. Flow (perm)	1883	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.06	0.06	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	47	0	0
Future Volume (vph)	43	0	0	47	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	0	51	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	51	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	0	47	0	0
Future Volume (Veh/h)	43	0	0	47	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	0	51	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			47		98	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		98	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1560		901	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	51	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1560	1700
Volume to Capacity	0.03	0.00	0.13
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1023	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

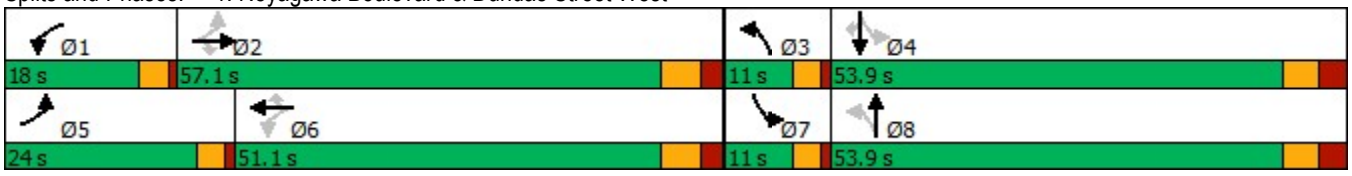
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Future Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1601	1807	4269	1555	1738	3419	0	1755	3476	1585
Flt Permitted	0.117			0.103			0.440			0.344		
Satd. Flow (perm)	220	4433	1571	196	4269	1534	804	3419	0	634	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199			124		23				287
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	423	1425	271	251	1054	70	278	365	90	159	371	433
Shared Lane Traffic (%)												
Lane Group Flow (vph)	423	1425	271	251	1054	70	278	455	0	159	371	433
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	24.0	57.1	57.1	18.0	51.1	51.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.1%	40.8%	40.8%	12.9%	36.5%	36.5%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	20.0	50.4	50.4	14.0	44.4	44.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	65.8	44.8	44.8	55.7	38.7	38.7	32.1	22.0		32.1	22.0	22.0
Actuated g/C Ratio	0.60	0.41	0.41	0.51	0.35	0.35	0.29	0.20		0.29	0.20	0.20
v/c Ratio	1.00	0.79	0.36	0.82	0.70	0.11	0.95	0.65		0.62	0.53	0.80
Control Delay	75.2	32.9	8.4	49.4	34.1	0.6	76.1	43.0		40.7	42.5	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	75.2	32.9	8.4	49.4	34.1	0.6	76.1	43.0		40.7	42.5	26.0
LOS	E	C	A	D	C	A	E	D		D	D	C
Approach Delay		38.2			35.2			55.5			34.7	
Approach LOS		D			D			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 110.1			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 39.2		Intersection LOS: D	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	423	1425	271	251	1054	70	278	455	159	371	433
v/c Ratio	1.00	0.79	0.36	0.82	0.70	0.11	0.95	0.65	0.62	0.53	0.80
Control Delay	75.2	32.9	8.4	49.4	34.1	0.6	76.1	43.0	40.7	42.5	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.2	32.9	8.4	49.4	34.1	0.6	76.1	43.0	40.7	42.5	26.0
Queue Length 50th (m)	~68.9	103.7	9.0	34.0	76.5	0.0	~50.3	46.6	26.1	39.0	31.0
Queue Length 95th (m)	#167.9	156.6	31.8	#95.5	115.8	0.8	#89.5	64.1	43.4	54.3	69.9
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	421	2060	836	307	1748	701	294	1495	257	1506	840
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.69	0.32	0.82	0.60	0.10	0.95	0.30	0.62	0.25	0.52

Intersection Summary

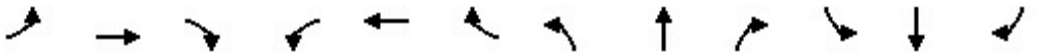
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Future Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1573	1807	4269	1534	1738	3421		1754	3476	1564
Flt Permitted	0.12	1.00	1.00	0.10	1.00	1.00	0.44	1.00		0.34	1.00	1.00
Satd. Flow (perm)	221	4433	1573	197	4269	1534	805	3421		634	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	423	1425	271	251	1054	70	278	365	90	159	371	433
RTOR Reduction (vph)	0	0	118	0	0	45	0	18	0	0	0	229
Lane Group Flow (vph)	423	1425	153	251	1054	25	278	437	0	159	371	204
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	63.0	44.8	44.8	52.9	38.7	38.7	29.1	22.0		29.1	22.0	22.0
Effective Green, g (s)	63.0	44.8	44.8	52.9	38.7	38.7	29.1	22.0		29.1	22.0	22.0
Actuated g/C Ratio	0.57	0.41	0.41	0.48	0.35	0.35	0.27	0.20		0.27	0.20	0.20
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	417	1810	642	303	1506	541	273	686		240	697	313
v/s Ratio Prot	c0.19	0.32		0.11	0.25		c0.07	0.13		0.04	0.11	
v/s Ratio Perm	c0.39		0.10	0.29		0.02	c0.20			0.13		0.13
v/c Ratio	1.01	0.79	0.24	0.83	0.70	0.05	1.02	0.64		0.66	0.53	0.65
Uniform Delay, d1	30.6	28.3	21.3	26.3	30.5	23.4	38.9	40.2		33.5	39.2	40.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	47.7	2.3	0.2	16.8	1.4	0.0	59.2	1.9		6.7	0.8	4.8
Delay (s)	78.4	30.6	21.5	43.1	32.0	23.4	98.2	42.1		40.2	40.0	45.1
Level of Service	E	C	C	D	C	C	F	D		D	D	D
Approach Delay (s)		39.0			33.5			63.4			42.3	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	21.6
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



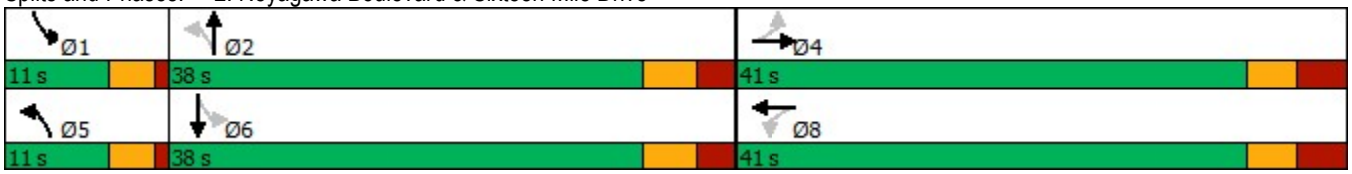
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	8	177	1	62	95	614	109	39	655	14
Future Volume (vph)	51	0	8	177	1	62	95	614	109	39	655	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			1.00		1.00		
Frt		0.982			0.965			0.977			0.997	
Flt Protected		0.958			0.964		0.950			0.950		
Satd. Flow (prot)	0	1804	0	0	1670	0	1722	3439	0	1601	3535	0
Flt Permitted		0.662			0.744		0.299			0.361		
Satd. Flow (perm)	0	1246	0	0	1288	0	542	3439	0	607	3535	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			22			25			3	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Adj. Flow (vph)	52	0	8	181	1	63	97	627	111	40	668	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	60	0	0	245	0	97	738	0	40	682	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		6.5	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.0	30.3		11.0	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		11.0	38.0		11.0	38.0	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		12.2%	42.2%		12.2%	42.2%	
Maximum Green (s)	34.2	34.2		34.2	34.2		7.0	31.7		7.0	31.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		16.8			16.8		32.0	27.3		30.0	22.6	
Actuated g/C Ratio		0.27			0.27		0.52	0.44		0.49	0.37	
v/c Ratio		0.15			0.67		0.23	0.48		0.10	0.52	
Control Delay		3.1			28.4		9.5	15.2		8.7	18.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		3.1			28.4		9.5	15.2		8.7	18.6	
LOS		A			C		A	B		A	B	
Approach Delay		3.1			28.4			14.5			18.1	
Approach LOS		A			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 61.4
Natural Cycle: 85
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 17.3 Intersection LOS: B
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive



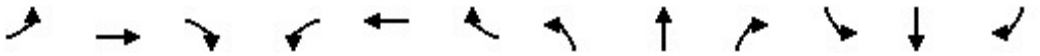
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	245	97	738	40	682
v/c Ratio	0.15	0.67	0.23	0.48	0.10	0.52
Control Delay	3.1	28.4	9.5	15.2	8.7	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	28.4	9.5	15.2	8.7	18.6
Queue Length 50th (m)	0.0	21.8	4.5	23.2	1.8	31.9
Queue Length 95th (m)	4.4	49.0	14.2	63.1	7.2	58.5
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	760	757	423	1863	417	1904
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.32	0.23	0.40	0.10	0.36

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	8	177	1	62	95	614	109	39	655	14
Future Volume (vph)	51	0	8	177	1	62	95	614	109	39	655	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.96			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1805			1670		1722	3441		1600	3535	
Flt Permitted		0.66			0.74		0.30	1.00		0.36	1.00	
Satd. Flow (perm)		1247			1288		543	3441		608	3535	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	52	0	8	181	1	63	97	627	111	40	668	14
RTOR Reduction (vph)	0	44	0	0	16	0	0	14	0	0	2	0
Lane Group Flow (vph)	0	16	0	0	229	0	97	724	0	40	680	0
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.8			16.8		32.6	27.3		26.6	24.3	
Effective Green, g (s)		16.8			16.8		32.6	27.3		26.6	24.3	
Actuated g/C Ratio		0.26			0.26		0.51	0.43		0.42	0.38	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329			340		377	1479		290	1352	
v/s Ratio Prot							c0.02	c0.21		0.00	0.19	
v/s Ratio Perm		0.01			c0.18		0.11			0.05		
v/c Ratio		0.05			0.67		0.26	0.49		0.14	0.50	
Uniform Delay, d1		17.4			20.9		8.3	13.1		11.0	15.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			5.2		0.4	0.3		0.2	0.3	
Delay (s)		17.5			26.1		8.7	13.3		11.2	15.3	
Level of Service		B			C		A	B		B	B	
Approach Delay (s)		17.5			26.1			12.8			15.1	
Approach LOS		B			C			B			B	

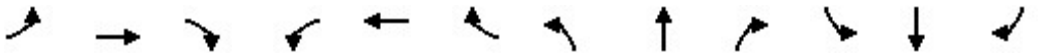
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	17.1
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	10	24	23	0	0	1	0	0	0	0
Future Volume (vph)	0	9	10	24	23	0	0	1	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.929										
Flt Protected					0.975							
Satd. Flow (prot)	0	1750	0	0	1836	0	0	1883	0	0	1883	0
Flt Permitted					0.975							
Satd. Flow (perm)	0	1750	0	0	1836	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	10	11	26	25	0	0	1	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	51	0	0	1	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

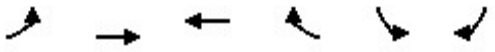
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	9	10	24	23	0	0	1	0	0	0	0
Future Volume (Veh/h)	0	9	10	24	23	0	0	1	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	10	11	26	25	0	0	1	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	25			21			92	92	16	93	98	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			21			92	92	16	93	98	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	100	100	100
cM capacity (veh/h)	1589			1595			880	785	1064	879	779	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	51	1	0
Volume Left	0	26	0	0
Volume Right	11	0	0	0
cSH	1589	1595	785	1700
Volume to Capacity	0.00	0.02	0.00	0.00
Queue Length 95th (m)	0.0	0.4	0.0	0.0
Control Delay (s)	0.0	3.8	9.6	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	3.8	9.6	0.0
Approach LOS			A	A

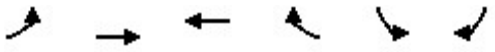
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	19.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	2035	1695	1	0	47
Future Volume (vph)	0	2035	1695	1	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1601	0	1629
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2212	1842	1	0	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2212	1842	1	0	51
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	2035	1695	1	0	47
Future Volume (Veh/h)	0	2035	1695	1	0	47
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2212	1842	1	0	51
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	1843				2579	614
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1215				2125	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	94
cM capacity (veh/h)	461				35	877

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	737	737	737	614	614	614	1	51
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	1	51
cSH	1700	1700	1700	1700	1700	1700	1700	877
Volume to Capacity	0.43	0.43	0.43	0.36	0.36	0.36	0.00	0.06
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4
Lane LOS								A
Approach Delay (s)	0.0			0.0				9.4
Approach LOS								A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	113	0	824	836	8
Future Volume (vph)	0	113	0	824	836	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3575	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3575	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	123	0	896	909	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	0	896	918	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

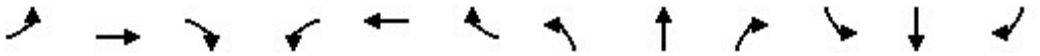
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	113	0	824	836	8
Future Volume (Veh/h)	0	113	0	824	836	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	123	0	896	909	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.91	0.86	0.86			
vC, conflicting volume	1362	459	918			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	704	33	569			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	336	885	856			

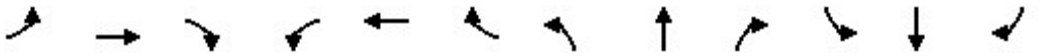
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	123	448	448	606	312
Volume Left	0	0	0	0	0
Volume Right	123	0	0	0	9
cSH	885	1700	1700	1700	1700
Volume to Capacity	0.14	0.26	0.26	0.36	0.18
Queue Length 95th (m)	3.7	0.0	0.0	0.0	0.0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.7	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	48	0	13	0	26	0	0	0	43	0	0
Future Volume (vph)	0	48	0	13	0	26	0	0	0	43	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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					0.910							
Flt Protected					0.984						0.950	
Satd. Flow (prot)	0	1883	0	0	1687	0	0	1883	0	0	1789	0
Flt Permitted					0.984						0.950	
Satd. Flow (perm)	0	1883	0	0	1687	0	0	1883	0	0	1789	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	52	0	14	0	28	0	0	0	47	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	42	0	0	0	0	0	47	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	48	0	13	0	26	0	0	0	43	0	0
Future Volume (Veh/h)	0	48	0	13	0	26	0	0	0	43	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	52	0	14	0	28	0	0	0	47	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	122	94	0	120	94	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	122	94	0	120	94	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	93	100	98	100	97	100			97		
cM capacity (veh/h)	812	773	1085	794	773	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	52	42	0	47
Volume Left	0	14	0	47
Volume Right	0	28	0	0
cSH	773	967	1700	1623
Volume to Capacity	0.07	0.04	0.00	0.03
Queue Length 95th (m)	1.6	1.0	0.0	0.7
Control Delay (s)	10.0	8.9	0.0	7.3
Lane LOS	A	A		A
Approach Delay (s)	10.0	8.9	0.0	7.3
Approach LOS	A	A		

Intersection Summary				
Average Delay	8.8			
Intersection Capacity Utilization	19.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	33	0	43	67	0	26
Future Volume (vph)	33	0	43	67	0	26
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					0.865	
Flt Protected				0.981		
Satd. Flow (prot)	1883	0	0	1848	1629	0
Flt Permitted				0.981		
Satd. Flow (perm)	1883	0	0	1848	1629	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	0	47	73	0	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	120	28	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	33	0	43	67	0	26
Future Volume (Veh/h)	33	0	43	67	0	26
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	0	47	73	0	28
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			36		203	36
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			36		203	36
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	97
cM capacity (veh/h)			1575		762	1037

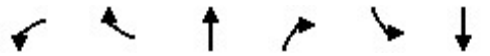
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	36	120	28
Volume Left	0	47	0
Volume Right	0	0	28
cSH	1700	1575	1037
Volume to Capacity	0.02	0.03	0.03
Queue Length 95th (m)	0.0	0.7	0.6
Control Delay (s)	0.0	3.0	8.6
Lane LOS		A	A
Approach Delay (s)	0.0	3.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	0	1	0	0	34
Future Volume (vph)	13	0	1	0	0	34
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)	1789	0	1883	0	0	1883
Flt Permitted	0.950					
Satd. Flow (perm)	1789	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	0	1	0	0	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	1	0	0	37
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	13	0	1	0	0	34
Future Volume (Veh/h)	13	0	1	0	0	34
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	1	0	0	37
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	38	1			1	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	1			1	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	974	1084			1622	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	1	37
Volume Left	14	0	0
Volume Right	0	0	0
cSH	974	1700	1622
Volume to Capacity	0.01	0.00	0.00
Queue Length 95th (m)	0.3	0.0	0.0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	9	0	45	22	24	24
Future Volume (vph)	9	0	45	22	24	24
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					0.932	
Flt Protected				0.968	0.976	
Satd. Flow (prot)	1883	0	0	1823	1713	0
Flt Permitted				0.968	0.976	
Satd. Flow (perm)	1883	0	0	1823	1713	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	0	49	24	26	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	73	52	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	9	0	45	22	24	24
Future Volume (Veh/h)	9	0	45	22	24	24
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	49	24	26	26
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			10		132	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			10		132	10
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		97	98
cM capacity (veh/h)			1610		836	1071

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	10	73	52
Volume Left	0	49	26
Volume Right	0	0	26
cSH	1700	1610	939
Volume to Capacity	0.01	0.03	0.06
Queue Length 95th (m)	0.0	0.7	1.3
Control Delay (s)	0.0	5.0	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	5.0	9.1
Approach LOS			A

Intersection Summary			
Average Delay		6.2	
Intersection Capacity Utilization		20.3%	ICU Level of Service
Analysis Period (min)		15	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	13	0	0
Future Volume (vph)	0	0	0	13	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	14	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	14	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	13	0	0
Future Volume (Veh/h)	0	0	0	13	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	14	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		14	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		14	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1005	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	14	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1623	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

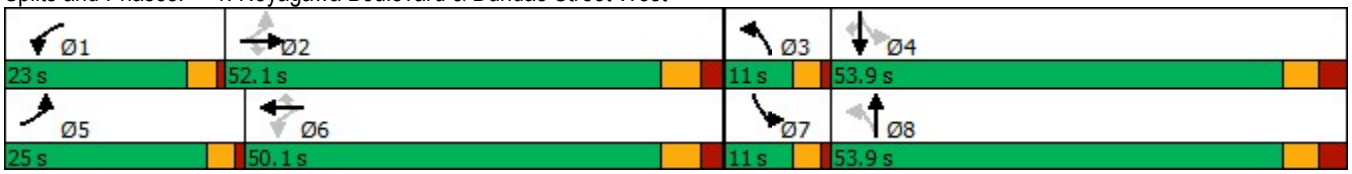
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Future Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1617	1825	4476	1541	1789	3486	0	1807	3579	1585
Flt Permitted	0.088			0.131			0.433			0.187		
Satd. Flow (perm)	166	4433	1588	251	4476	1521	814	3486	0	353	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			232			98		21				313
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	442	1082	253	306	1775	168	329	544	124	146	389	488
Shared Lane Traffic (%)												
Lane Group Flow (vph)	442	1082	253	306	1775	168	329	668	0	146	389	488
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	25.0	52.1	52.1	23.0	50.1	50.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.9%	37.2%	37.2%	16.4%	35.8%	35.8%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	21.0	45.4	45.4	19.0	43.4	43.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	69.3	45.6	45.6	65.3	43.5	43.5	39.6	29.7		39.6	29.7	29.7
Actuated g/C Ratio	0.56	0.37	0.37	0.53	0.35	0.35	0.32	0.24		0.32	0.24	0.24
v/c Ratio	1.19	0.66	0.34	0.81	1.12	0.28	1.04	0.78		0.74	0.45	0.79
Control Delay	143.0	35.6	6.4	43.8	100.6	14.6	97.5	48.7		52.5	40.9	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	143.0	35.6	6.4	43.8	100.6	14.6	97.5	48.7		52.5	40.9	25.1
LOS	F	D	A	D	F	B	F	D		D	D	C
Approach Delay		58.1			86.4			64.8			35.0	
Approach LOS		E			F			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 123			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 65.9		Intersection LOS: E	
Intersection Capacity Utilization 111.6%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	442	1082	253	306	1775	168	329	668	146	389	488
v/c Ratio	1.19	0.66	0.34	0.81	1.12	0.28	1.04	0.78	0.74	0.45	0.79
Control Delay	143.0	35.6	6.4	43.8	100.6	14.6	97.5	48.7	52.5	40.9	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	143.0	35.6	6.4	43.8	100.6	14.6	97.5	48.7	52.5	40.9	25.1
Queue Length 50th (m)	~109.9	88.1	3.2	45.5	~201.4	11.2	~66.9	77.2	24.5	42.2	41.0
Queue Length 95th (m)	#202.7	125.8	23.0	#109.4	#279.9	31.8	#112.7	97.2	#42.6	56.2	82.3
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	371	1641	734	377	1584	601	317	1349	196	1372	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.66	0.34	0.81	1.12	0.28	1.04	0.50	0.74	0.28	0.62

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Future Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1589	1825	4476	1521	1788	3488		1806	3579	1563
Flt Permitted	0.09	1.00	1.00	0.13	1.00	1.00	0.43	1.00		0.19	1.00	1.00
Satd. Flow (perm)	165	4433	1589	251	4476	1521	815	3488		355	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	442	1082	253	306	1775	168	329	544	124	146	389	488
RTOR Reduction (vph)	0	0	146	0	0	63	0	16	0	0	0	237
Lane Group Flow (vph)	442	1082	107	306	1775	105	329	652	0	146	389	251
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	66.7	45.6	45.6	62.7	43.6	43.6	36.7	29.7		36.7	29.7	29.7
Effective Green, g (s)	66.7	45.6	45.6	62.7	43.6	43.6	36.7	29.7		36.7	29.7	29.7
Actuated g/C Ratio	0.54	0.37	0.37	0.51	0.35	0.35	0.30	0.24		0.30	0.24	0.24
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	368	1643	589	372	1586	539	298	842		188	864	377
v/s Ratio Prot	c0.21	0.24		0.13	0.40		c0.06	0.19		0.04	0.11	
v/s Ratio Perm	c0.44		0.07	0.29		0.07	c0.27			0.19		0.16
v/c Ratio	1.20	0.66	0.18	0.82	1.12	0.19	1.10	0.77		0.78	0.45	0.66
Uniform Delay, d1	39.5	32.2	26.1	26.3	39.7	27.5	42.0	43.5		35.3	39.7	42.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	113.7	1.0	0.1	13.6	62.7	0.2	83.0	4.5		18.0	0.4	4.4
Delay (s)	153.2	33.2	26.3	39.9	102.4	27.7	125.0	48.0		53.3	40.1	46.5
Level of Service	F	C	C	D	F	C	F	D		D	D	D
Approach Delay (s)		62.1			88.4			73.4			45.0	
Approach LOS		E			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	70.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	123.0	Sum of lost time (s)	21.6
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		

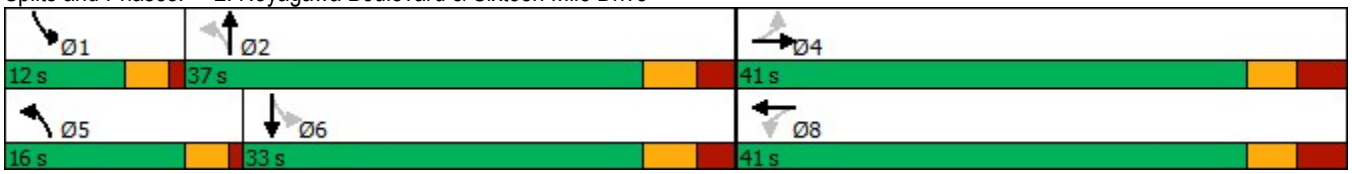
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	4	17	269	5	63	232	582	198	111	645	19
Future Volume (vph)	30	4	17	269	5	63	232	582	198	111	645	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99		1.00		
Frt		0.955			0.975			0.962			0.996	
Flt Protected		0.971			0.962		0.950			0.950		
Satd. Flow (prot)	0	1774	0	0	1774	0	1825	3423	0	1825	3566	0
Flt Permitted		0.751			0.733		0.225			0.279		
Satd. Flow (perm)	0	1372	0	0	1351	0	432	3423	0	534	3566	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			15			56			3	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	32	4	18	289	5	68	249	626	213	119	694	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	362	0	249	839	0	119	714	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		16.0	37.0		12.0	33.0	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		17.8%	41.1%		13.3%	36.7%	
Maximum Green (s)	34.2	34.2		34.2	34.2		12.0	30.7		8.0	26.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		24.0			24.0		39.9	28.9		33.0	23.0	
Actuated g/C Ratio		0.32			0.32		0.53	0.38		0.44	0.31	
v/c Ratio		0.12			0.82		0.58	0.62		0.33	0.66	
Control Delay		14.0			39.1		16.8	22.2		13.5	27.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		14.0			39.1		16.8	22.2		13.5	27.3	
LOS		B			D		B	C		B	C	
Approach Delay		14.0			39.1			21.0			25.4	
Approach LOS		B			D			C			C	

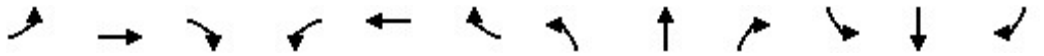
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.3			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	54	362	249	839	119	714
v/c Ratio	0.12	0.82	0.58	0.62	0.33	0.66
Control Delay	14.0	39.1	16.8	22.2	13.5	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.0	39.1	16.8	22.2	13.5	27.3
Queue Length 50th (m)	3.5	44.6	18.1	50.2	8.0	47.3
Queue Length 95th (m)	11.2	81.7	38.5	81.5	19.4	75.5
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	648	636	458	1479	378	1298
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.57	0.54	0.57	0.31	0.55

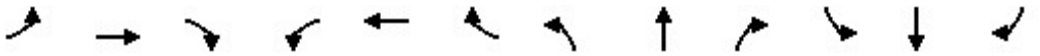
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	4	17	269	5	63	232	582	198	111	645	19
Future Volume (vph)	30	4	17	269	5	63	232	582	198	111	645	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.97		1.00	0.96		1.00	1.00	
Flt Protected		0.97			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1774			1771		1825	3425		1824	3565	
Flt Permitted		0.75			0.73		0.23	1.00		0.28	1.00	
Satd. Flow (perm)		1372			1350		433	3425		536	3565	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	4	18	289	5	68	249	626	213	119	694	20
RTOR Reduction (vph)	0	12	0	0	10	0	0	35	0	0	2	0
Lane Group Flow (vph)	0	42	0	0	352	0	249	804	0	119	712	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.0			24.0		38.8	28.9		29.9	24.0	
Effective Green, g (s)		24.0			24.0		38.8	28.9		29.9	24.0	
Actuated g/C Ratio		0.32			0.32		0.51	0.38		0.39	0.32	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		433			426		419	1304		311	1127	
v/s Ratio Prot							c0.08	c0.23		0.03	0.20	
v/s Ratio Perm		0.03			c0.26		0.22			0.12		
v/c Ratio		0.10			0.83		0.59	0.62		0.38	0.63	
Uniform Delay, d1		18.3			24.0		11.8	19.0		15.0	22.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			12.3		2.3	0.9		0.8	1.2	
Delay (s)		18.4			36.3		14.1	19.9		15.8	23.3	
Level of Service		B			D		B	B		B	C	
Approach Delay (s)		18.4			36.3			18.6			22.3	
Approach LOS		B			D			B			C	

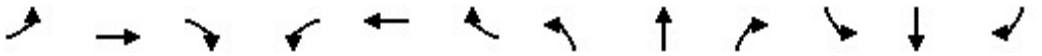
Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	17.1
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	25	18	36	47	0	0	4	0	0	0	0
Future Volume (vph)	0	25	18	36	47	0	0	4	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.943										
Flt Protected					0.979							
Satd. Flow (prot)	0	1776	0	0	1844	0	0	1883	0	0	1883	0
Flt Permitted					0.979							
Satd. Flow (perm)	0	1776	0	0	1844	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	20	39	51	0	0	4	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	90	0	0	4	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

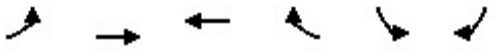
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	25	18	36	47	0	0	4	0	0	0	0
Future Volume (Veh/h)	0	25	18	36	47	0	0	4	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	20	39	51	0	0	4	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	51			47			166	166	37	168	176	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51			47			166	166	37	168	176	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	99	100	100	100	100
cM capacity (veh/h)	1555			1560			783	709	1035	777	700	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	47	90	4	0
Volume Left	0	39	0	0
Volume Right	20	0	0	0
cSH	1555	1560	709	1700
Volume to Capacity	0.00	0.02	0.01	0.00
Queue Length 95th (m)	0.0	0.6	0.1	0.0
Control Delay (s)	0.0	3.3	10.1	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	3.3	10.1	0.0
Approach LOS			B	A

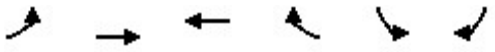
Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1707	2485	4	0	75
Future Volume (vph)	0	1707	2485	4	0	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1601	0	1629
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1855	2701	4	0	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1855	2701	4	0	82
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1707	2485	4	0	75
Future Volume (Veh/h)	0	1707	2485	4	0	75
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1855	2701	4	0	82
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.66				0.66	0.66
vC, conflicting volume	2705				3319	900
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1797				2722	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	89
cM capacity (veh/h)	226				11	720

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	618	618	618	900	900	900	4	82
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	4	82
cSH	1700	1700	1700	1700	1700	1700	1700	720
Volume to Capacity	0.36	0.36	0.36	0.53	0.53	0.53	0.00	0.11
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6
Lane LOS								B
Approach Delay (s)	0.0			0.0				10.6
Approach LOS								B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	90	0	1109	913	25
Future Volume (vph)	0	90	0	1109	913	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.996	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3564	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3564	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	98	0	1205	992	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	98	0	1205	1019	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

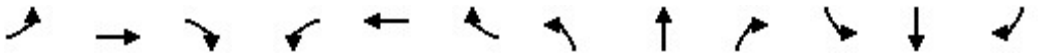
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	90	0	1109	913	25
Future Volume (Veh/h)	0	90	0	1109	913	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	98	0	1205	992	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.91	0.83	0.83			
vC, conflicting volume	1608	510	1019			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	677	5	618			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	353	895	797			

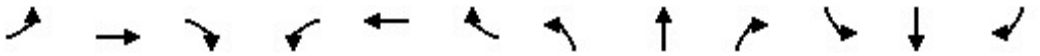
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	98	602	602	661	358
Volume Left	0	0	0	0	0
Volume Right	98	0	0	0	27
cSH	895	1700	1700	1700	1700
Volume to Capacity	0.11	0.35	0.35	0.39	0.21
Queue Length 95th (m)	2.8	0.0	0.0	0.0	0.0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.5	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	38.3%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	32	0	21	0	14	0	0	0	101	0	0
Future Volume (vph)	0	32	0	21	0	14	0	0	0	101	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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					0.947							
Flt Protected					0.971						0.950	
Satd. Flow (prot)	0	1883	0	0	1732	0	0	1883	0	0	1789	0
Flt Permitted					0.971						0.950	
Satd. Flow (perm)	0	1883	0	0	1732	0	0	1883	0	0	1789	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	35	0	23	0	15	0	0	0	110	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	38	0	0	0	0	0	110	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	32	0	21	0	14	0	0	0	101	0	0
Future Volume (Veh/h)	0	32	0	21	0	14	0	0	0	101	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	35	0	23	0	15	0	0	0	110	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	235	220	0	238	220	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	235	220	0	238	220	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	94	100	96	100	99	100			93		
cM capacity (veh/h)	673	632	1085	651	632	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	35	38	0	110
Volume Left	0	23	0	110
Volume Right	0	15	0	0
cSH	632	773	1700	1623
Volume to Capacity	0.06	0.05	0.00	0.07
Queue Length 95th (m)	1.3	1.2	0.0	1.7
Control Delay (s)	11.0	9.9	0.0	7.4
Lane LOS	B	A		A
Approach Delay (s)	11.0	9.9	0.0	7.4
Approach LOS	B	A		

Intersection Summary				
Average Delay	8.6			
Intersection Capacity Utilization	20.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	37	0	101	155	0	14
Future Volume (vph)	37	0	101	155	0	14
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					0.865	
Flt Protected				0.981		
Satd. Flow (prot)	1883	0	0	1848	1629	0
Flt Permitted				0.981		
Satd. Flow (perm)	1883	0	0	1848	1629	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	0	110	168	0	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	278	15	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	37	0	101	155	0	14
Future Volume (Veh/h)	37	0	101	155	0	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	0	110	168	0	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked					0.91	
vC, conflicting volume			40		428	40
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			40		318	40
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	99
cM capacity (veh/h)			1570		569	1031

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	40	278	15
Volume Left	0	110	0
Volume Right	0	0	15
cSH	1700	1570	1031
Volume to Capacity	0.02	0.07	0.01
Queue Length 95th (m)	0.0	1.7	0.3
Control Delay (s)	0.0	3.3	8.5
Lane LOS		A	A
Approach Delay (s)	0.0	3.3	8.5
Approach LOS			A

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	0	4	0	0	54
Future Volume (vph)	21	0	4	0	0	54
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)	1789	0	1883	0	0	1883
Flt Permitted	0.950					
Satd. Flow (perm)	1789	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	0	4	0	0	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	4	0	0	59
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	0	4	0	0	54
Future Volume (Veh/h)	21	0	4	0	0	54
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	0	4	0	0	59
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	63	4			4	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	63	4			4	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	943	1080			1618	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	4	59
Volume Left	23	0	0
Volume Right	0	0	0
cSH	943	1700	1618
Volume to Capacity	0.02	0.00	0.00
Queue Length 95th (m)	0.6	0.0	0.0
Control Delay (s)	8.9	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.9	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	0	112	43	36	12
Future Volume (vph)	25	0	112	43	36	12
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					0.966	
Flt Protected				0.965	0.964	
Satd. Flow (prot)	1883	0	0	1818	1754	0
Flt Permitted				0.965	0.964	
Satd. Flow (perm)	1883	0	0	1818	1754	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	0	122	47	39	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	169	52	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	0	112	43	36	12
Future Volume (Veh/h)	25	0	112	43	36	12
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	0	122	47	39	13
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			27		318	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			27		318	27
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		94	99
cM capacity (veh/h)			1587		623	1048

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	27	169	52
Volume Left	0	122	39
Volume Right	0	0	13
cSH	1700	1587	694
Volume to Capacity	0.02	0.08	0.07
Queue Length 95th (m)	0.0	1.9	1.8
Control Delay (s)	0.0	5.5	10.6
Lane LOS		A	B
Approach Delay (s)	0.0	5.5	10.6
Approach LOS			B

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	21	0	0
Future Volume (vph)	0	0	0	21	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	23	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	23	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

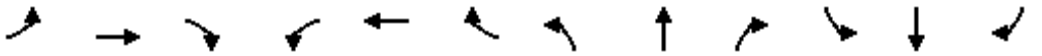
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	21	0	0
Future Volume (Veh/h)	0	0	0	21	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	23	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		23	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		23	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		993	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	23	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1623	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		

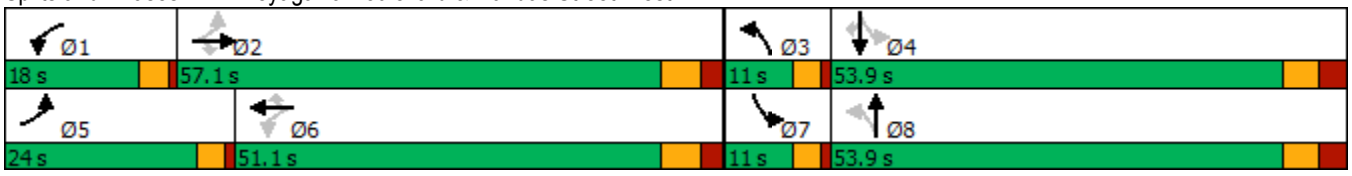


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Future Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1601	1807	4269	1555	1738	3416	0	1755	3476	1585
Flt Permitted	0.105			0.096			0.481			0.340		
Satd. Flow (perm)	198	4433	1571	183	4269	1534	879	3416	0	626	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			124		25				286
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	410	1513	288	265	1115	49	295	365	96	113	336	456
Shared Lane Traffic (%)												
Lane Group Flow (vph)	410	1513	288	265	1115	49	295	461	0	113	336	456
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	24.0	57.1	57.1	18.0	51.1	51.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.1%	40.8%	40.8%	12.9%	36.5%	36.5%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	20.0	50.4	50.4	14.0	44.4	44.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	68.7	47.7	47.7	58.5	41.6	41.6	33.9	23.9		33.9	23.9	23.9
Actuated g/C Ratio	0.60	0.42	0.42	0.51	0.36	0.36	0.30	0.21		0.30	0.21	0.21
v/c Ratio	1.03	0.82	0.37	0.90	0.72	0.08	0.95	0.63		0.44	0.46	0.83
Control Delay	84.1	35.2	9.5	64.1	35.6	0.2	75.3	42.8		33.5	41.6	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	84.1	35.2	9.5	64.1	35.6	0.2	75.3	42.8		33.5	41.6	29.0
LOS	F	D	A	E	D	A	E	D		C	D	C
Approach Delay		40.9			39.6			55.5			34.2	
Approach LOS		D			D			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 114.7			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 41.5		Intersection LOS: D	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	410	1513	288	265	1115	49	295	461	113	336	456
v/c Ratio	1.03	0.82	0.37	0.90	0.72	0.08	0.95	0.63	0.44	0.46	0.83
Control Delay	84.1	35.2	9.5	64.1	35.6	0.2	75.3	42.8	33.5	41.6	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.1	35.2	9.5	64.1	35.6	0.2	75.3	42.8	33.5	41.6	29.0
Queue Length 50th (m)	~77.2	118.2	11.5	40.9	85.6	0.0	54.9	48.5	18.7	35.9	38.9
Queue Length 95th (m)	#171.5	178.3	37.3	#111.1	129.6	0.0	#87.8	64.5	31.7	49.2	78.3
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	399	1971	809	294	1672	676	312	1431	254	1441	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.77	0.36	0.90	0.67	0.07	0.95	0.32	0.44	0.23	0.56

Intersection Summary

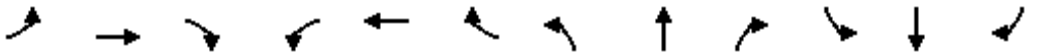
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Future Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1573	1807	4269	1534	1737	3416		1754	3476	1564
Flt Permitted	0.10	1.00	1.00	0.10	1.00	1.00	0.48	1.00		0.34	1.00	1.00
Satd. Flow (perm)	197	4433	1573	182	4269	1534	880	3416		627	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	410	1512	288	265	1115	49	295	365	96	112	336	456
RTOR Reduction (vph)	0	0	117	0	0	31	0	20	0	0	0	226
Lane Group Flow (vph)	410	1513	171	265	1115	18	295	441	0	113	336	230
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	65.9	47.7	47.7	55.9	41.7	41.7	31.0	23.9		31.0	23.9	23.9
Effective Green, g (s)	65.9	47.7	47.7	55.9	41.7	41.7	31.0	23.9		31.0	23.9	23.9
Actuated g/C Ratio	0.58	0.42	0.42	0.49	0.36	0.36	0.27	0.21		0.27	0.21	0.21
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	394	1846	655	290	1554	558	291	713		239	725	326
v/s Ratio Prot	c0.18	0.34		0.11	0.26		c0.06	0.13		0.03	0.10	
v/s Ratio Perm	c0.42		0.11	0.33		0.01	c0.21			0.10		0.15
v/c Ratio	1.04	0.82	0.26	0.91	0.72	0.03	1.01	0.62		0.47	0.46	0.70
Uniform Delay, d1	33.1	29.6	21.9	30.8	31.3	23.4	40.5	41.2		32.8	39.7	42.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	56.3	3.0	0.2	31.2	1.6	0.0	56.3	1.6		1.5	0.5	6.8
Delay (s)	89.4	32.6	22.1	62.0	32.9	23.4	96.8	42.8		34.3	40.2	48.8
Level of Service	F	C	C	E	C	C	F	D		C	D	D
Approach Delay (s)		41.7			38.0			63.8			43.8	
Approach LOS		D			D			E			D	

Intersection Summary					
HCM 2000 Control Delay	44.2	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	1.06				
Actuated Cycle Length (s)	114.5	Sum of lost time (s)	21.6		
Intersection Capacity Utilization	88.3%	ICU Level of Service	E		
Analysis Period (min)	15				

c Critical Lane Group



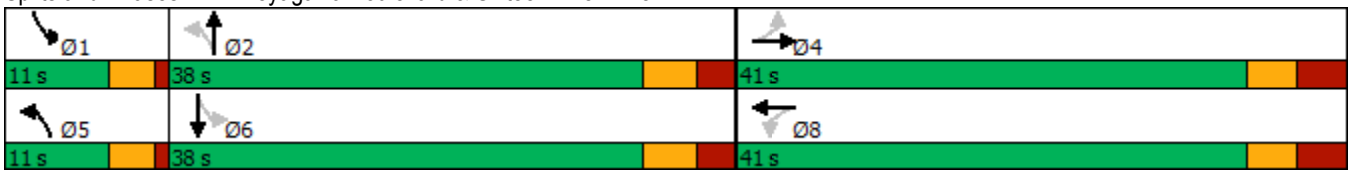
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	18	185	1	64	19	652	114	41	687	3
Future Volume (vph)	1	0	18	185	1	64	19	652	114	41	687	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			1.00		1.00		
Frt		0.872			0.966			0.978			0.999	
Flt Protected		0.997			0.964		0.950			0.950		
Satd. Flow (prot)	0	1650	0	0	1671	0	1722	3443	0	1601	3541	0
Flt Permitted		0.981			0.770		0.381			0.263		
Satd. Flow (perm)	0	1623	0	0	1334	0	691	3443	0	443	3541	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			22			24			1	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Adj. Flow (vph)	1	0	18	189	1	65	19	665	116	42	701	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	19	0	0	255	0	19	781	0	42	704	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		6.5	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.0	30.3		11.0	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		11.0	38.0		11.0	38.0	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		12.2%	42.2%		12.2%	42.2%	
Maximum Green (s)	34.2	34.2		34.2	34.2		7.0	31.7		7.0	31.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		16.7			16.7		29.8	23.7		31.2	27.7	
Actuated g/C Ratio		0.28			0.28		0.50	0.40		0.52	0.46	
v/c Ratio		0.04			0.66		0.04	0.57		0.11	0.43	
Control Delay		0.2			27.6		8.4	17.6		8.8	13.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		0.2			27.6		8.4	17.6		8.8	13.3	
LOS		A			C		A	B		A	B	
Approach Delay		0.2			27.6			17.4			13.1	
Approach LOS		A			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 60
Natural Cycle: 85
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 16.9 Intersection LOS: B
Intersection Capacity Utilization 62.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





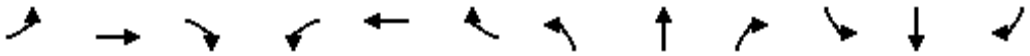
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	19	255	19	781	42	704
v/c Ratio	0.04	0.66	0.04	0.57	0.11	0.43
Control Delay	0.2	27.6	8.4	17.6	8.8	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.2	27.6	8.4	17.6	8.8	13.3
Queue Length 50th (m)	0.0	22.6	0.9	37.0	2.0	23.0
Queue Length 95th (m)	0.0	53.0	4.2	67.3	7.4	60.6
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	1020	819	471	1950	374	2031
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.31	0.04	0.40	0.11	0.35

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	18	185	1	64	19	652	114	41	687	3
Future Volume (vph)	1	0	18	185	1	64	19	652	114	41	687	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.87			0.97		1.00	0.98		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1651			1670		1722	3443		1601	3542	
Flt Permitted		0.98			0.77		0.38	1.00		0.26	1.00	
Satd. Flow (perm)		1624			1333		690	3443		443	3542	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1	0	18	189	1	65	19	665	116	42	701	3
RTOR Reduction (vph)	0	14	0	0	16	0	0	14	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	239	0	19	767	0	42	703	0
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.7			16.7		26.2	25.2		31.2	27.7	
Effective Green, g (s)		16.7			16.7		26.2	25.2		31.2	27.7	
Actuated g/C Ratio		0.27			0.27		0.42	0.40		0.50	0.44	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		433			356		305	1388		285	1569	
v/s Ratio Prot							0.00	c0.22		c0.01	0.20	
v/s Ratio Perm		0.00			c0.18		0.03			0.07		
v/c Ratio		0.01			0.67		0.06	0.55		0.15	0.45	
Uniform Delay, d1		16.8			20.4		10.7	14.3		8.5	12.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			4.9		0.1	0.5		0.2	0.2	
Delay (s)		16.8			25.4		10.7	14.8		8.7	12.3	
Level of Service		B			C		B	B		A	B	
Approach Delay (s)		16.8			25.4			14.7			12.1	
Approach LOS		B			C			B			B	

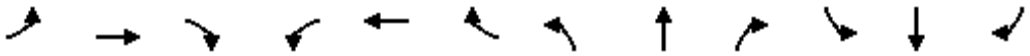
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	17.1
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	19	0	0	23	0	0	0	0	0	0	0
Future Volume (vph)	0	19	0	0	23	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	21	0	0	25	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	25	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

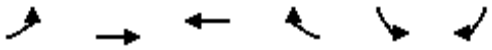
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	19	0	0	23	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	19	0	0	23	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	21	0	0	25	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	25			21			46	46	21	46	46	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			21			46	46	21	46	46	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1589			1595			955	846	1056	955	846	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	25	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1589	1595	1700	1700
Volume to Capacity	0.00	0.00	0.01	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS			A	A

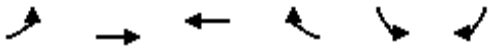
Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	2122	1792	0	0	0
Future Volume (vph)	0	2122	1792	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1883	0	1883
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1883	0	1883
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2307	1948	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2307	1948	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

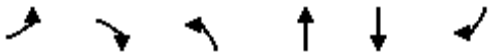
* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	2122	1792	0	0	0
Future Volume (Veh/h)	0	2122	1792	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2307	1948	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.79				0.79	0.79
vC, conflicting volume	1948				2717	649
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1290				2257	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	424				28	862

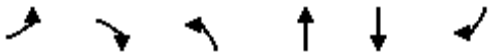
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	769	769	769	649	649	649	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.45	0.45	0.45	0.38	0.38	0.38	0.02	0.11
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								A
Approach Delay (s)	0.0			0.0				0.0
Approach LOS								A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	791	895	0
Future Volume (vph)	0	0	0	791	895	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	1883	0	3579	3579	0
Flt Permitted						
Satd. Flow (perm)	0	1883	0	3579	3579	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	860	973	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	860	973	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

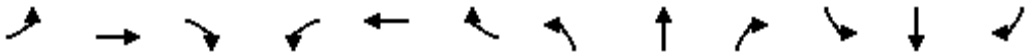
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	791	895	0
Future Volume (Veh/h)	0	0	0	791	895	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	860	973	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.91	0.86	0.86			
vC, conflicting volume	1403	486	973			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	768	91	654			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	309	819	802			

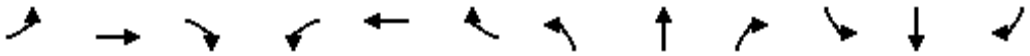
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	430	430	649	324
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.25	0.25	0.38	0.19
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.12	0.05	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	19	0	0	23	0	0
Future Volume (vph)	19	0	0	23	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	25	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	23	0	0
Future Volume (Veh/h)	19	0	0	23	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	25	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			21		46	21
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		46	21
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1595		964	1056

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	25	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1595	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	1883	0	0	1883
Flt Permitted						
Satd. Flow (perm)	1883	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.04	0.02	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	19	0	0	23	0	0
Future Volume (vph)	19	0	0	23	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	25	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	19	0	0	23	0	0
Future Volume (Veh/h)	19	0	0	23	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	0	0	25	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			21		46	21
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			21		46	21
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1595		964	1056

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	21	25	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1595	1700
Volume to Capacity	0.01	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

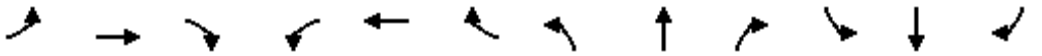
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1023	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.01	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

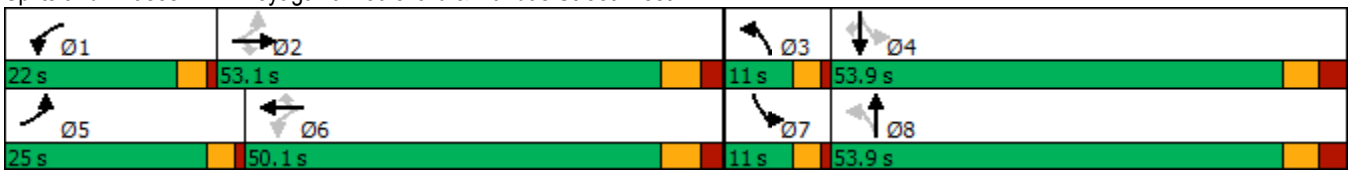


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Future Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1617	1825	4476	1541	1789	3477	0	1807	3579	1585
Flt Permitted	0.086			0.115			0.443			0.201		
Satd. Flow (perm)	162	4433	1588	221	4476	1521	833	3477	0	380	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			235			93		23				300
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	389	1148	269	324	1875	89	349	528	131	106	382	514
Shared Lane Traffic (%)												
Lane Group Flow (vph)	389	1148	269	324	1875	89	349	659	0	106	382	514
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	25.0	53.1	53.1	22.0	50.1	50.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.9%	37.9%	37.9%	15.7%	35.8%	35.8%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	21.0	46.4	46.4	18.0	43.4	43.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	70.5	46.7	46.7	64.5	43.6	43.6	40.7	30.8		40.7	30.8	30.8
Actuated g/C Ratio	0.57	0.38	0.38	0.52	0.35	0.35	0.33	0.25		0.33	0.25	0.25
v/c Ratio	1.06	0.69	0.36	0.93	1.19	0.15	1.07	0.75		0.52	0.43	0.84
Control Delay	98.6	36.6	7.3	65.5	130.0	6.5	105.6	46.9		35.8	40.2	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	98.6	36.6	7.3	65.5	130.0	6.5	105.6	46.9		35.8	40.2	30.6
LOS	F	D	A	E	F	A	F	D		D	D	C
Approach Delay		45.6			116.0			67.2			34.8	
Approach LOS		D			F			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 124.3			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay: 73.8		Intersection LOS: E	
Intersection Capacity Utilization 108.5%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	389	1148	269	324	1875	89	349	659	106	382	514
v/c Ratio	1.06	0.69	0.36	0.93	1.19	0.15	1.07	0.75	0.52	0.43	0.84
Control Delay	98.6	36.6	7.3	65.5	130.0	6.5	105.6	46.9	35.8	40.2	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.6	36.6	7.3	65.5	130.0	6.5	105.6	46.9	35.8	40.2	30.6
Queue Length 50th (m)	~82.6	93.4	5.0	54.5	~220.7	0.0	~76.6	75.6	17.4	41.3	52.9
Queue Length 95th (m)	#177.9	140.0	27.4	#136.5	#315.5	11.5	#119.3	95.1	29.5	55.0	96.6
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	368	1664	742	348	1571	594	327	1336	205	1361	779
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.69	0.36	0.93	1.19	0.15	1.07	0.49	0.52	0.28	0.66

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Future Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1589	1825	4476	1521	1788	3479		1805	3579	1563
Flt Permitted	0.09	1.00	1.00	0.12	1.00	1.00	0.44	1.00		0.20	1.00	1.00
Satd. Flow (perm)	162	4433	1589	222	4476	1521	834	3479		382	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	389	1148	269	324	1875	89	349	528	131	106	382	514
RTOR Reduction (vph)	0	0	147	0	0	58	0	17	0	0	0	226
Lane Group Flow (vph)	389	1148	122	324	1875	31	349	642	0	106	382	288
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	67.7	46.6	46.6	61.7	43.6	43.6	37.8	30.8		37.8	30.8	30.8
Effective Green, g (s)	67.7	46.6	46.6	61.7	43.6	43.6	37.8	30.8		37.8	30.8	30.8
Actuated g/C Ratio	0.55	0.38	0.38	0.50	0.35	0.35	0.30	0.25		0.30	0.25	0.25
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	365	1664	596	344	1572	534	307	863		196	888	387
v/s Ratio Prot	c0.18	0.26		0.14	c0.42		c0.06	0.18		0.03	0.11	
v/s Ratio Perm	0.40		0.08	0.33		0.02	c0.28			0.13		0.18
v/c Ratio	1.07	0.69	0.21	0.94	1.19	0.06	1.14	0.74		0.54	0.43	0.75
Uniform Delay, d1	40.0	32.7	26.2	32.3	40.2	26.7	42.0	43.0		33.0	39.3	43.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	65.6	1.2	0.2	33.6	93.3	0.0	93.6	3.5		3.0	0.3	7.6
Delay (s)	105.7	33.9	26.4	65.9	133.6	26.7	135.6	46.5		36.0	39.6	50.6
Level of Service	F	C	C	E	F	C	F	D		D	D	D
Approach Delay (s)		48.2			119.8			77.4			44.9	
Approach LOS		D			F			E			D	

Intersection Summary					
HCM 2000 Control Delay	79.3	HCM 2000 Level of Service	E		
HCM 2000 Volume to Capacity ratio	1.15				
Actuated Cycle Length (s)	124.1	Sum of lost time (s)	21.6		
Intersection Capacity Utilization	108.5%	ICU Level of Service	G		
Analysis Period (min)	15				

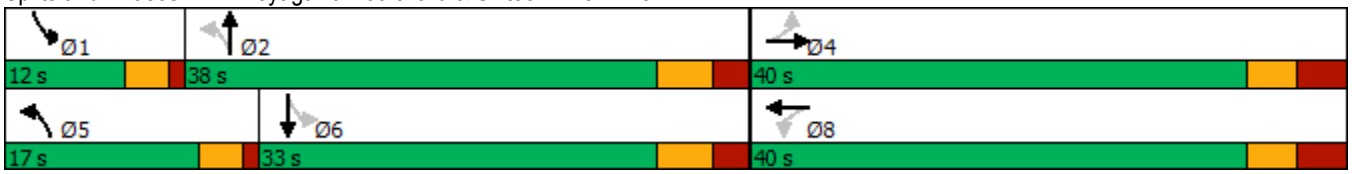
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	284	5	66	40	618	205	115	658	2
Future Volume (vph)	4	4	35	284	5	66	40	618	205	115	658	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00			0.99		1.00		
Frt		0.888			0.975			0.963				
Flt Protected		0.996			0.962		0.950			0.950		
Satd. Flow (prot)	0	1681	0	0	1774	0	1825	3428	0	1825	3579	0
Flt Permitted		0.964			0.738		0.329			0.185		
Satd. Flow (perm)	0	1627	0	0	1360	0	632	3428	0	354	3579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			15			55				
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	4	4	38	305	5	71	43	665	220	124	708	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	381	0	43	885	0	124	710	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	40.0	40.0		40.0	40.0		17.0	38.0		12.0	33.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%		18.9%	42.2%		13.3%	36.7%	
Maximum Green (s)	33.2	33.2		33.2	33.2		13.0	31.7		8.0	26.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		25.4			25.4		34.4	26.6		36.1	29.5	
Actuated g/C Ratio		0.34			0.34		0.46	0.36		0.48	0.40	
v/c Ratio		0.08			0.81		0.10	0.70		0.38	0.50	
Control Delay		8.2			37.5		11.2	24.5		14.4	20.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		8.2			37.5		11.2	24.5		14.4	20.7	
LOS		A			D		B	C		B	C	
Approach Delay		8.2			37.5			23.9			19.7	
Approach LOS		A			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74.6			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive

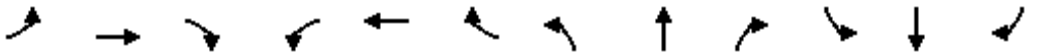




Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	381	43	885	124	710
v/c Ratio	0.08	0.81	0.10	0.70	0.38	0.50
Control Delay	8.2	37.5	11.2	24.5	14.4	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	37.5	11.2	24.5	14.4	20.7
Queue Length 50th (m)	0.8	48.9	3.0	56.8	9.0	44.3
Queue Length 95th (m)	7.5	#96.6	8.5	86.0	19.7	68.5
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	786	648	540	1572	338	1515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.59	0.08	0.56	0.37	0.47

Intersection Summary

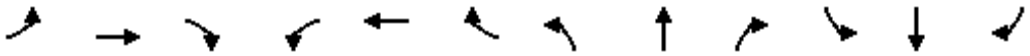
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	35	284	5	66	40	618	205	115	658	2
Future Volume (vph)	4	4	35	284	5	66	40	618	205	115	658	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.89			0.97		1.00	0.96		1.00	1.00	
Flt Protected		1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1682			1771		1825	3429		1825	3577	
Flt Permitted		0.96			0.74		0.33	1.00		0.18	1.00	
Satd. Flow (perm)		1628			1359		632	3429		355	3577	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	4	38	305	5	71	43	665	220	124	708	2
RTOR Reduction (vph)	0	25	0	0	10	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	21	0	0	371	0	43	850	0	124	710	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.3			25.3		31.3	27.5		35.3	29.5	
Effective Green, g (s)		25.3			25.3		31.3	27.5		35.3	29.5	
Actuated g/C Ratio		0.33			0.33		0.41	0.36		0.47	0.39	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		544			454		321	1245		278	1393	
v/s Ratio Prot							0.01	c0.25		c0.03	0.20	
v/s Ratio Perm		0.01			c0.27		0.05			0.17		
v/c Ratio		0.04			0.82		0.13	0.68		0.45	0.51	
Uniform Delay, d1		17.0			23.1		13.4	20.4		12.9	17.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			10.9		0.2	1.6		1.1	0.3	
Delay (s)		17.0			34.0		13.6	22.0		14.0	17.9	
Level of Service		B			C		B	C		B	B	
Approach Delay (s)		17.0			34.0			21.6			17.3	
Approach LOS		B			C			C			B	

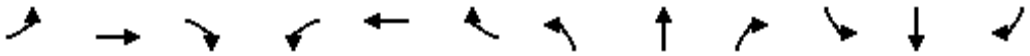
Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.7	Sum of lost time (s)	17.1
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	43	0	0	47	0	0	0	0	0	0	0
Future Volume (vph)	0	43	0	0	47	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	47	0	0	51	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	51	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

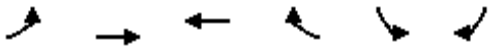
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	43	0	0	47	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	43	0	0	47	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	47	0	0	51	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	51			47			98	98	47	98	98	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51			47			98	98	47	98	98	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1555			1560			884	792	1022	884	792	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	47	51	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1555	1560	1700	1700
Volume to Capacity	0.00	0.00	0.04	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS			A	A

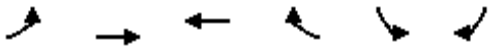
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1734	2630	0	0	0
Future Volume (vph)	0	1734	2630	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1883	0	1883
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1883	0	1883
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1885	2859	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1885	2859	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.1%		ICU Level of Service A	
Analysis Period (min) 15			

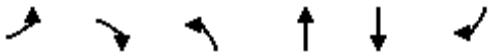
* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1734	2630	0	0	0
Future Volume (Veh/h)	0	1734	2630	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1885	2859	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.67				0.67	0.67
vC, conflicting volume	2859				3487	953
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2040				2982	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	182				7	723

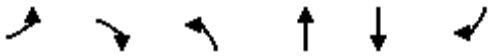
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	628	628	628	953	953	953	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.37	0.37	0.37	0.56	0.56	0.56	0.06	0.18
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS								A
Approach Delay (s)	0.0			0.0				0.0
Approach LOS								A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	965	986	0
Future Volume (vph)	0	0	0	965	986	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	1883	0	3579	3579	0
Flt Permitted						
Satd. Flow (perm)	0	1883	0	3579	3579	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	1049	1072	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1049	1072	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

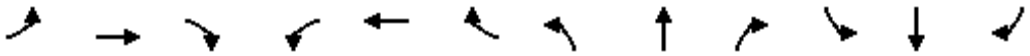
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	965	986	0
Future Volume (Veh/h)	0	0	0	965	986	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	1049	1072	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.92	0.85	0.85			
vC, conflicting volume	1596	536	1072			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	737	100	731			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	325	795	738			

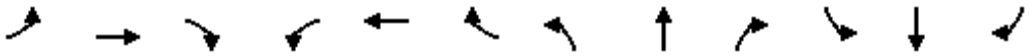
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	0	524	524	715	357
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.31	0.31	0.42	0.21
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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												
Flt Protected												
Satd. Flow (prot)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted												
Satd. Flow (perm)	0	1883	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.09	0.06	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	47	0	0
Future Volume (vph)	43	0	0	47	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	0	51	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	51	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	0	47	0	0
Future Volume (Veh/h)	43	0	0	47	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	0	51	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked						
vC, conflicting volume			47		98	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		98	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1560		901	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	51	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1560	1700
Volume to Capacity	0.03	0.00	0.02
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	1883	0	0	1883
Flt Permitted						
Satd. Flow (perm)	1883	0	1883	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1085			1623	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.06	0.06	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	0	47	0	0
Future Volume (vph)	43	0	0	47	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	0	51	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	51	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	0	47	0	0
Future Volume (Veh/h)	43	0	0	47	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	0	51	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			47		98	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		98	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1560		901	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	51	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1560	1700
Volume to Capacity	0.03	0.00	0.13
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	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						
Satd. Flow (prot)	1883	0	0	1883	1883	0
Flt Permitted						
Satd. Flow (perm)	1883	0	0	1883	1883	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			0		0	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1623		1023	1085

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	0	0	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.03	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

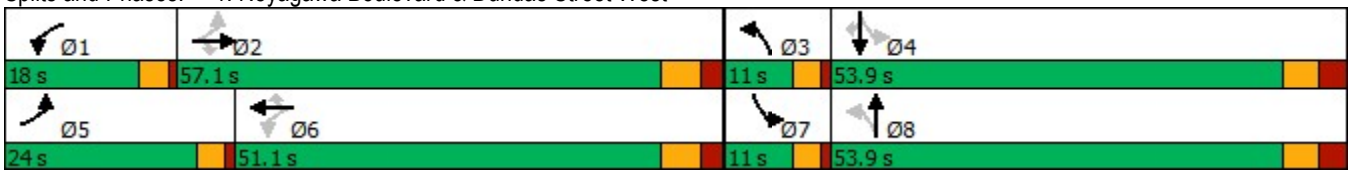
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Future Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1601	1807	4269	1555	1738	3419	0	1755	3476	1585
Flt Permitted	0.099			0.095			0.386			0.329		
Satd. Flow (perm)	186	4433	1571	181	4269	1534	706	3419	0	606	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200			124		24				279
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	473	1513	288	265	1131	73	304	384	96	200	424	459
Shared Lane Traffic (%)												
Lane Group Flow (vph)	473	1513	288	265	1131	73	304	480	0	200	424	459
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	24.0	57.1	57.1	18.0	51.1	51.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.1%	40.8%	40.8%	12.9%	36.5%	36.5%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	20.0	50.4	50.4	14.0	44.4	44.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	68.9	47.9	47.9	58.7	41.8	41.8	35.4	25.4		35.4	25.4	25.4
Actuated g/C Ratio	0.59	0.41	0.41	0.50	0.36	0.36	0.30	0.22		0.30	0.22	0.22
v/c Ratio	1.22	0.83	0.38	0.92	0.74	0.12	1.10	0.63		0.79	0.56	0.82
Control Delay	149.5	36.4	9.8	67.7	36.9	0.9	117.6	42.5		54.3	43.1	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	149.5	36.4	9.8	67.7	36.9	0.9	117.6	42.5		54.3	43.1	29.2
LOS	F	D	A	E	D	A	F	D		D	D	C
Approach Delay		56.5			40.7			71.6			39.3	
Approach LOS		E			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 116.4			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.22			
Intersection Signal Delay: 51.2		Intersection LOS: D	
Intersection Capacity Utilization 94.3%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West



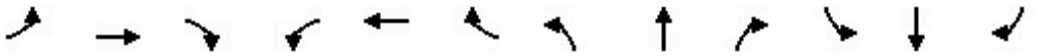


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	473	1513	288	265	1131	73	304	480	200	424	459
v/c Ratio	1.22	0.83	0.38	0.92	0.74	0.12	1.10	0.63	0.79	0.56	0.82
Control Delay	149.5	36.4	9.8	67.7	36.9	0.9	117.6	42.5	54.3	43.1	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.5	36.4	9.8	67.7	36.9	0.9	117.6	42.5	54.3	43.1	29.2
Queue Length 50th (m)	~113.5	121.8	11.9	42.3	89.7	0.0	~67.6	51.1	34.8	46.7	41.8
Queue Length 95th (m)	#216.1	#183.1	38.2	#114.0	134.8	1.3	#110.5	67.1	53.2	61.6	81.2
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	389	1943	801	289	1649	668	277	1412	254	1421	804
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.78	0.36	0.92	0.69	0.11	1.10	0.34	0.79	0.30	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

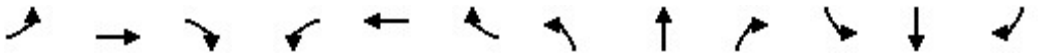
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Future Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1573	1807	4269	1534	1738	3420		1754	3476	1564
Flt Permitted	0.10	1.00	1.00	0.10	1.00	1.00	0.39	1.00		0.33	1.00	1.00
Satd. Flow (perm)	186	4433	1573	182	4269	1534	707	3420		607	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	473	1512	288	265	1131	73	304	384	96	200	424	459
RTOR Reduction (vph)	0	0	118	0	0	47	0	19	0	0	0	218
Lane Group Flow (vph)	473	1513	170	265	1131	26	304	461	0	200	424	241
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	66.1	47.9	47.9	56.1	41.9	41.9	32.5	25.4		32.5	25.4	25.4
Effective Green, g (s)	66.1	47.9	47.9	56.1	41.9	41.9	32.5	25.4		32.5	25.4	25.4
Actuated g/C Ratio	0.57	0.41	0.41	0.48	0.36	0.36	0.28	0.22		0.28	0.22	0.22
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	384	1827	648	286	1539	553	260	747		239	759	341
v/s Ratio Prot	c0.21	0.34		0.11	0.26		c0.07	0.13		0.05	0.12	
v/s Ratio Perm	c0.49		0.11	0.33		0.02	c0.25			0.18		0.15
v/c Ratio	1.23	0.83	0.26	0.93	0.73	0.05	1.17	0.62		0.84	0.56	0.71
Uniform Delay, d1	34.4	30.5	22.5	31.7	32.3	24.2	40.5	41.0		37.5	40.4	42.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	125.1	3.2	0.2	34.1	1.9	0.0	109.4	1.5		21.7	0.9	6.5
Delay (s)	159.4	33.7	22.7	65.8	34.2	24.2	149.9	42.5		59.2	41.3	48.5
Level of Service	F	C	C	E	C	C	F	D		E	D	D
Approach Delay (s)		58.5			39.4			84.2			47.7	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	55.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	116.2	Sum of lost time (s)	21.6
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

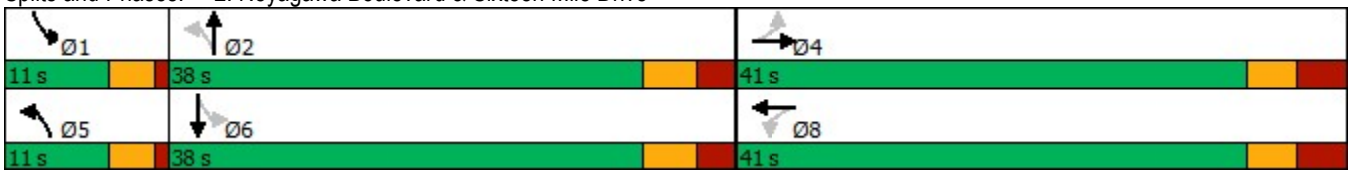


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	0	8	185	1	64	121	652	114	41	695	23
Future Volume (vph)	85	0	8	185	1	64	121	652	114	41	695	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			1.00		1.00		
Frt		0.989			0.966			0.978			0.995	
Flt Protected		0.956			0.964		0.950			0.950		
Satd. Flow (prot)	0	1814	0	0	1671	0	1722	3443	0	1601	3529	0
Flt Permitted		0.631			0.721		0.282			0.306		
Satd. Flow (perm)	0	1197	0	0	1249	0	511	3443	0	515	3529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88			22			24			4	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Adj. Flow (vph)	87	0	8	189	1	65	123	665	116	42	709	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	255	0	123	781	0	42	732	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		6.5	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.0	30.3		11.0	30.3	
Total Split (s)	41.0	41.0		41.0	41.0		11.0	38.0		11.0	38.0	
Total Split (%)	45.6%	45.6%		45.6%	45.6%		12.2%	42.2%		12.2%	42.2%	
Maximum Green (s)	34.2	34.2		34.2	34.2		7.0	31.7		7.0	31.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		18.0			18.0		32.4	26.2		31.2	23.7	
Actuated g/C Ratio		0.28			0.28		0.51	0.41		0.49	0.37	
v/c Ratio		0.24			0.69		0.31	0.55		0.11	0.56	
Control Delay		7.1			30.4		10.8	17.8		9.3	19.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		7.1			30.4		10.8	17.8		9.3	19.5	
LOS		A			C		B	B		A	B	
Approach Delay		7.1			30.4			16.9			19.0	
Approach LOS		A			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 63.8			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

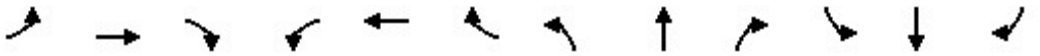
Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	255	123	781	42	732
v/c Ratio	0.24	0.69	0.31	0.55	0.11	0.56
Control Delay	7.1	30.4	10.8	17.8	9.3	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	30.4	10.8	17.8	9.3	19.5
Queue Length 50th (m)	0.6	23.2	6.2	37.8	2.0	36.2
Queue Length 95th (m)	10.4	54.4	18.2	70.0	7.8	65.7
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	714	715	399	1813	378	1849
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.36	0.31	0.43	0.11	0.40

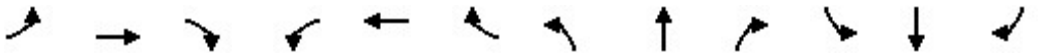
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	0	8	185	1	64	121	652	114	41	695	23
Future Volume (vph)	85	0	8	185	1	64	121	652	114	41	695	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.96			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1814			1670		1722	3443		1600	3530	
Flt Permitted		0.63			0.72		0.28	1.00		0.31	1.00	
Satd. Flow (perm)		1197			1249		512	3443		515	3530	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	87	0	8	189	1	65	123	665	116	42	709	23
RTOR Reduction (vph)	0	64	0	0	16	0	0	14	0	0	2	0
Lane Group Flow (vph)	0	31	0	0	239	0	123	767	0	42	730	0
Confl. Peds. (#/hr)	1		1	1		1			3	3		
Heavy Vehicles (%)	0%	0%	0%	9%	10%	0%	6%	3%	5%	14%	3%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.0			18.0		31.5	26.2		28.1	24.5	
Effective Green, g (s)		18.0			18.0		31.5	26.2		28.1	24.5	
Actuated g/C Ratio		0.28			0.28		0.49	0.40		0.43	0.38	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		331			346		347	1389		283	1332	
v/s Ratio Prot							c0.03	c0.22		0.01	0.21	
v/s Ratio Perm		0.03			c0.19		0.14			0.06		
v/c Ratio		0.09			0.69		0.35	0.55		0.15	0.55	
Uniform Delay, d1		17.4			21.0		9.6	14.8		10.8	15.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			5.9		0.6	0.5		0.2	0.5	
Delay (s)		17.5			26.8		10.3	15.3		11.1	16.3	
Level of Service		B			C		B	B		B	B	
Approach Delay (s)		17.5			26.8			14.6			16.0	
Approach LOS		B			C			B			B	

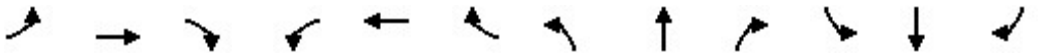
Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	64.9	Sum of lost time (s)	17.1
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	10	38	23	0	0	1	9	0	0	0
Future Volume (vph)	0	9	10	38	23	0	0	1	9	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.929						0.877				
Flt Protected					0.970							
Satd. Flow (prot)	0	1750	0	0	1827	0	0	1652	0	0	1883	0
Flt Permitted					0.970							
Satd. Flow (perm)	0	1750	0	0	1827	0	0	1652	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	10	11	41	25	0	0	1	10	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	66	0	0	11	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

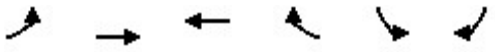
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	9	10	38	23	0	0	1	9	0	0	0
Future Volume (Veh/h)	0	9	10	38	23	0	0	1	9	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	10	11	41	25	0	0	1	10	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	25			21			122	122	16	133	128	25
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	25			21			122	122	16	133	128	25
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	99	100	100	100
cM capacity (veh/h)	1589			1595			835	748	1064	814	743	1051

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	66	11	0
Volume Left	0	41	0	0
Volume Right	11	0	10	0
cSH	1589	1595	1025	1700
Volume to Capacity	0.00	0.03	0.01	0.00
Queue Length 95th (m)	0.0	0.6	0.2	0.0
Control Delay (s)	0.0	4.6	8.6	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.6	8.6	0.0
Approach LOS			A	A

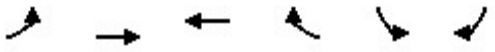
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	2182	1795	24	0	81
Future Volume (vph)	0	2182	1795	24	0	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1601	0	1629
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2372	1951	26	0	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2372	1951	26	0	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	2182	1795	24	0	81
Future Volume (Veh/h)	0	2182	1795	24	0	81
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2372	1951	26	0	88
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.79				0.79	0.79
vC, conflicting volume	1977				2742	650
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1308				2275	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	90
cM capacity (veh/h)	415				27	857

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	791	791	791	650	650	650	26	88
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	26	88
cSH	1700	1700	1700	1700	1700	1700	1700	857
Volume to Capacity	0.47	0.47	0.47	0.38	0.38	0.38	0.02	0.10
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7
Lane LOS								A
Approach Delay (s)	0.0			0.0				9.7
Approach LOS								A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	181	0	893	885	8
Future Volume (vph)	0	181	0	893	885	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3575	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3575	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	197	0	971	962	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	197	0	971	971	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

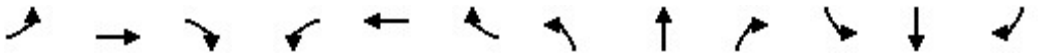
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	181	0	893	885	8
Future Volume (Veh/h)	0	181	0	893	885	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	197	0	971	962	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.89	0.84	0.84			
vC, conflicting volume	1452	486	971			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	744	11	588			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	78	100			
cM capacity (veh/h)	313	897	827			

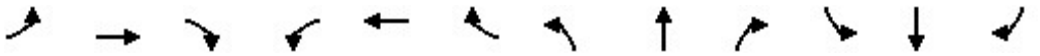
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	197	486	486	641	330
Volume Left	0	0	0	0	0
Volume Right	197	0	0	0	9
cSH	897	1700	1700	1700	1700
Volume to Capacity	0.22	0.29	0.29	0.38	0.19
Queue Length 95th (m)	6.4	0.0	0.0	0.0	0.0
Control Delay (s)	10.1	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.1	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	75	0	13	0	26	0	20	41	43	21	0
Future Volume (vph)	0	75	0	13	0	26	0	20	41	43	21	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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					0.910			0.909				
Flt Protected					0.984						0.968	
Satd. Flow (prot)	0	1883	0	0	1687	0	0	1712	0	0	1823	0
Flt Permitted					0.984						0.968	
Satd. Flow (perm)	0	1883	0	0	1687	0	0	1712	0	0	1823	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	82	0	14	0	28	0	22	45	47	23	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	0	0	42	0	0	67	0	0	70	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	75	0	13	0	26	0	20	41	43	21	0
Future Volume (Veh/h)	0	75	0	13	0	26	0	20	41	43	21	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	82	0	14	0	28	0	22	45	47	23	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	190	184	23	202	162	44	23			67		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	190	184	23	202	162	44	23			67		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	88	100	98	100	97	100			97		
cM capacity (veh/h)	732	688	1054	671	708	1025	1592			1535		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	82	42	67	70
Volume Left	0	14	0	47
Volume Right	0	28	45	0
cSH	688	872	1592	1535
Volume to Capacity	0.12	0.05	0.00	0.03
Queue Length 95th (m)	3.1	1.2	0.0	0.7
Control Delay (s)	10.9	9.3	0.0	5.1
Lane LOS	B	A		A
Approach Delay (s)	10.9	9.3	0.0	5.1
Approach LOS	B	A		

Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	47	0	64	81	0	46
Future Volume (vph)	47	0	64	81	0	46
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					0.865	
Flt Protected				0.978		
Satd. Flow (prot)	1883	0	0	1842	1629	0
Flt Permitted				0.978		
Satd. Flow (perm)	1883	0	0	1842	1629	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	0	70	88	0	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	0	158	50	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

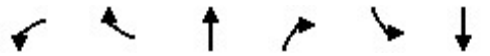
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	47	0	64	81	0	46
Future Volume (Veh/h)	47	0	64	81	0	46
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	0	70	88	0	50
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked					0.98	
vC, conflicting volume			51		279	51
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			51		260	51
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		100	95
cM capacity (veh/h)			1555		685	1017

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	51	158	50
Volume Left	0	70	0
Volume Right	0	0	50
cSH	1700	1555	1017
Volume to Capacity	0.03	0.05	0.05
Queue Length 95th (m)	0.0	1.1	1.2
Control Delay (s)	0.0	3.5	8.7
Lane LOS		A	A
Approach Delay (s)	0.0	3.5	8.7
Approach LOS			A

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	0	10	14	0	48
Future Volume (vph)	33	0	10	14	0	48
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			0.922			
Flt Protected	0.950					
Satd. Flow (prot)	1789	0	1737	0	0	1883
Flt Permitted	0.950					
Satd. Flow (perm)	1789	0	1737	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	0	11	15	0	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	26	0	0	52
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	33	0	10	14	0	48
Future Volume (Veh/h)	33	0	10	14	0	48
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	0	11	15	0	52
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	70	18			26	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	70	18			26	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			100	
cM capacity (veh/h)	934	1060			1588	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	36	26	52
Volume Left	36	0	0
Volume Right	0	15	0
cSH	934	1700	1588
Volume to Capacity	0.04	0.02	0.00
Queue Length 95th (m)	0.9	0.0	0.0
Control Delay (s)	9.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	9	9	59	22	38	38
Future Volume (vph)	9	9	59	22	38	38
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	0.932				0.932	
Flt Protected				0.965	0.976	
Satd. Flow (prot)	1755	0	0	1818	1713	0
Flt Permitted				0.965	0.976	
Satd. Flow (perm)	1755	0	0	1818	1713	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	10	64	24	41	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	88	82	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

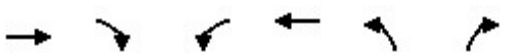
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	9	9	59	22	38	38
Future Volume (Veh/h)	9	9	59	22	38	38
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	10	64	24	41	41
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			20		167	15
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			20		167	15
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		95	96
cM capacity (veh/h)			1596		790	1065

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	20	88	82
Volume Left	0	64	41
Volume Right	10	0	41
cSH	1700	1596	907
Volume to Capacity	0.01	0.04	0.09
Queue Length 95th (m)	0.0	1.0	2.3
Control Delay (s)	0.0	5.4	9.4
Lane LOS		A	A
Approach Delay (s)	0.0	5.4	9.4
Approach LOS			A

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	14	21	13	20	61
Future Volume (vph)	0	14	21	13	20	61
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	0.865				0.899	
Flt Protected				0.970	0.988	
Satd. Flow (prot)	1629	0	0	1827	1673	0
Flt Permitted				0.970	0.988	
Satd. Flow (perm)	1629	0	0	1827	1673	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	15	23	14	22	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	37	88	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	14	21	13	20	61
Future Volume (Veh/h)	0	14	21	13	20	61
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	15	23	14	22	66
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			15		68	8
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			15		68	8
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	94
cM capacity (veh/h)			1603		924	1075

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	15	37	88
Volume Left	0	23	22
Volume Right	15	0	66
cSH	1700	1603	1033
Volume to Capacity	0.01	0.01	0.09
Queue Length 95th (m)	0.0	0.3	2.1
Control Delay (s)	0.0	4.6	8.8
Lane LOS		A	A
Approach Delay (s)	0.0	4.6	8.8
Approach LOS			A

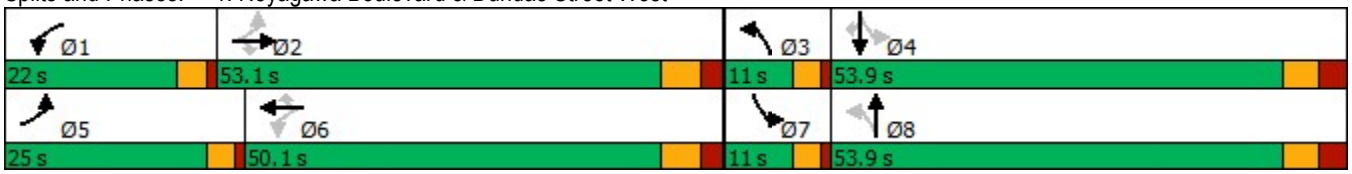
Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Future Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor			0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1789	4433	1617	1825	4476	1541	1789	3490	0	1807	3579	1585
Flt Permitted	0.086			0.112			0.407			0.171		
Satd. Flow (perm)	162	4433	1588	215	4476	1521	765	3490	0	323	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			235			93		21				297
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	483	1148	269	324	1948	173	365	588	131	176	425	517
Shared Lane Traffic (%)												
Lane Group Flow (vph)	483	1148	269	324	1948	173	365	719	0	176	425	517
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)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	25.0	53.1	53.1	22.0	50.1	50.1	11.0	53.9		11.0	53.9	53.9
Total Split (%)	17.9%	37.9%	37.9%	15.7%	35.8%	35.8%	7.9%	38.5%		7.9%	38.5%	38.5%
Maximum Green (s)	21.0	46.4	46.4	18.0	43.4	43.4	7.0	47.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	70.4	46.6	46.6	64.4	43.6	43.6	42.7	32.8		42.7	32.8	32.8
Actuated g/C Ratio	0.56	0.37	0.37	0.51	0.35	0.35	0.34	0.26		0.34	0.26	0.26
v/c Ratio	1.33	0.70	0.37	0.95	1.26	0.30	1.16	0.78		0.92	0.46	0.83
Control Delay	200.3	37.7	7.4	71.5	158.3	16.7	134.8	48.1		79.4	40.3	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	200.3	37.7	7.4	71.5	158.3	16.7	134.8	48.1		79.4	40.3	29.8
LOS	F	D	A	E	F	B	F	D		E	D	C
Approach Delay		74.8			136.8			77.3			41.6	
Approach LOS		E			F			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 126.2			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay: 92.7		Intersection LOS: F	
Intersection Capacity Utilization 119.2%		ICU Level of Service H	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	483	1148	269	324	1948	173	365	719	176	425	517
v/c Ratio	1.33	0.70	0.37	0.95	1.26	0.30	1.16	0.78	0.92	0.46	0.83
Control Delay	200.3	37.7	7.4	71.5	158.3	16.7	134.8	48.1	79.4	40.3	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	200.3	37.7	7.4	71.5	158.3	16.7	134.8	48.1	79.4	40.3	29.8
Queue Length 50th (m)	~137.0	98.2	5.3	58.1	~247.6	13.4	~87.0	84.8	30.1	46.6	54.8
Queue Length 95th (m)	#236.2	140.0	27.4	#137.7	#332.7	35.8	#139.8	105.6	#63.2	61.1	98.7
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	362	1636	734	340	1545	586	316	1318	191	1338	770
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.33	0.70	0.37	0.95	1.26	0.30	1.16	0.55	0.92	0.32	0.67

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Future Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	1.00	*0.80	1.00	1.00	*0.80	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1789	4433	1589	1825	4476	1521	1788	3490		1806	3579	1563
Flt Permitted	0.09	1.00	1.00	0.11	1.00	1.00	0.41	1.00		0.17	1.00	1.00
Satd. Flow (perm)	162	4433	1589	215	4476	1521	765	3490		326	3579	1563
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	483	1148	269	324	1948	173	365	588	131	176	425	517
RTOR Reduction (vph)	0	0	148	0	0	61	0	16	0	0	0	220
Lane Group Flow (vph)	483	1148	121	324	1948	112	365	703	0	176	425	297
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	67.7	46.6	46.6	61.7	43.6	43.6	39.8	32.8		39.8	32.8	32.8
Effective Green, g (s)	67.7	46.6	46.6	61.7	43.6	43.6	39.8	32.8		39.8	32.8	32.8
Actuated g/C Ratio	0.54	0.37	0.37	0.49	0.35	0.35	0.32	0.26		0.32	0.26	0.26
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	359	1638	587	336	1547	525	298	907		185	930	406
v/s Ratio Prot	c0.22	0.26		0.14	0.44		c0.07	0.20		0.05	0.12	
v/s Ratio Perm	c0.50		0.08	0.33		0.07	c0.32			0.25		0.19
v/c Ratio	1.35	0.70	0.21	0.96	1.26	0.21	1.22	0.78		0.95	0.46	0.73
Uniform Delay, d1	40.7	33.8	27.1	34.0	41.2	29.1	42.1	43.2		38.8	39.2	42.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	173.0	1.4	0.2	39.3	122.0	0.2	127.3	4.2		51.9	0.4	6.7
Delay (s)	213.7	35.2	27.3	73.3	163.3	29.3	169.4	47.4		90.8	39.5	49.3
Level of Service	F	D	C	E	F	C	F	D		F	D	D
Approach Delay (s)		79.4			141.9			88.5			52.1	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	99.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	126.1	Sum of lost time (s)	21.6
Intersection Capacity Utilization	119.2%	ICU Level of Service	H
Analysis Period (min)	15		

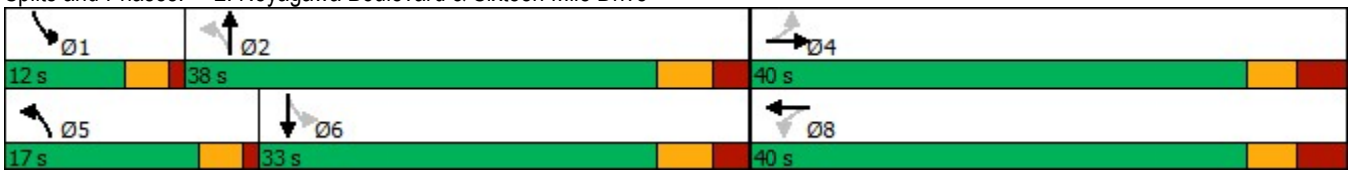
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	4	17	284	5	66	269	618	205	115	683	48
Future Volume (vph)	45	4	17	284	5	66	269	618	205	115	683	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	45.0		0.0	50.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00			0.99		1.00		
Frt		0.965			0.975			0.963			0.990	
Flt Protected		0.967			0.962		0.950			0.950		
Satd. Flow (prot)	0	1787	0	0	1774	0	1825	3428	0	1825	3547	0
Flt Permitted		0.707			0.722		0.178			0.263		
Satd. Flow (perm)	0	1306	0	0	1330	0	342	3428	0	504	3547	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			15			55			8	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		111.6			260.3			94.8			72.4	
Travel Time (s)		8.0			18.7			5.7			4.3	
Confl. Peds. (#/hr)			1	1					6	6		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Adj. Flow (vph)	48	4	18	305	5	71	289	665	220	124	734	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	70	0	0	381	0	289	885	0	124	786	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			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5		6.1	30.5		6.1	30.5		6.1	30.5	
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)	6.1	1.8		6.1	1.8		6.1	1.8		6.1	1.8	
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)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	38.8	38.8		38.8	38.8		11.5	30.3		11.5	30.3	
Total Split (s)	40.0	40.0		40.0	40.0		17.0	38.0		12.0	33.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%		18.9%	42.2%		13.3%	36.7%	
Maximum Green (s)	33.2	33.2		33.2	33.2		13.0	31.7		8.0	26.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	3.7		3.0	3.7	
All-Red Time (s)	3.5	3.5		3.5	3.5		1.0	2.6		1.0	2.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lead/Lag							Lead	Lag		Lead	Lag	
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		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	25.0	25.0		25.0	25.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		26.2			26.2		42.4	31.1		33.8	23.7	
Actuated g/C Ratio		0.33			0.33		0.53	0.39		0.42	0.30	
v/c Ratio		0.16			0.85		0.70	0.65		0.36	0.74	
Control Delay		15.9			43.2		23.5	23.2		14.6	30.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		15.9			43.2		23.5	23.2		14.6	30.9	
LOS		B			D		C	C		B	C	
Approach Delay		15.9			43.2			23.3			28.7	
Approach LOS		B			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 79.7			
Natural Cycle: 85			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 74.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Neyagawa Boulevard & Sixteen Mile Drive





Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	381	289	885	124	786
v/c Ratio	0.16	0.85	0.70	0.65	0.36	0.74
Control Delay	15.9	43.2	23.5	23.2	14.6	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	43.2	23.5	23.2	14.6	30.9
Queue Length 50th (m)	5.6	52.8	24.5	59.2	9.5	58.8
Queue Length 95th (m)	14.6	#98.7	#58.0	86.0	19.7	84.2
Internal Link Dist (m)	87.6	236.3		70.8		48.4
Turn Bay Length (m)			45.0		50.0	
Base Capacity (vph)	566	574	429	1448	351	1218
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.66	0.67	0.61	0.35	0.65

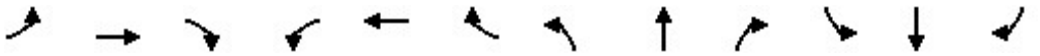
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	4	17	284	5	66	269	618	205	115	683	48
Future Volume (vph)	45	4	17	284	5	66	269	618	205	115	683	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.97		1.00	0.96		1.00	0.99	
Flt Protected		0.97			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1787			1771		1825	3428		1824	3548	
Flt Permitted		0.71			0.72		0.18	1.00		0.26	1.00	
Satd. Flow (perm)		1307			1329		342	3428		505	3548	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	48	4	18	305	5	71	289	665	220	124	734	52
RTOR Reduction (vph)	0	12	0	0	10	0	0	34	0	0	6	0
Lane Group Flow (vph)	0	58	0	0	371	0	289	851	0	124	780	0
Confl. Peds. (#/hr)			1	1					6	6		
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%	0%	1%	4%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.2			26.2		41.0	31.1		30.6	24.7	
Effective Green, g (s)		26.2			26.2		41.0	31.1		30.6	24.7	
Actuated g/C Ratio		0.33			0.33		0.51	0.39		0.38	0.31	
Clearance Time (s)		6.8			6.8		4.0	6.3		4.0	6.3	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		426			433		401	1327		289	1091	
v/s Ratio Prot							c0.11	0.25		0.03	0.22	
v/s Ratio Perm		0.04			c0.28		c0.26			0.13		
v/c Ratio		0.14			0.86		0.72	0.64		0.43	0.72	
Uniform Delay, d1		19.1			25.3		13.6	20.1		16.7	24.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			15.3		6.3	1.1		1.0	2.3	
Delay (s)		19.2			40.6		19.9	21.1		17.7	26.9	
Level of Service		B			D		B	C		B	C	
Approach Delay (s)		19.2			40.6			20.8			25.7	
Approach LOS		B			D			C			C	

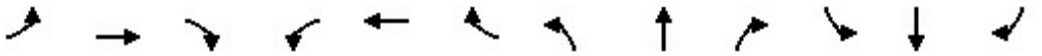
Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	17.1
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	25	18	53	47	0	0	4	32	0	0	0
Future Volume (vph)	0	25	18	53	47	0	0	4	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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		0.943						0.879				
Flt Protected					0.974							
Satd. Flow (prot)	0	1776	0	0	1834	0	0	1656	0	0	1883	0
Flt Permitted					0.974							
Satd. Flow (perm)	0	1776	0	0	1834	0	0	1656	0	0	1883	0
Link Speed (k/h)		50			50			48			48	
Link Distance (m)		202.5			50.4			139.0			40.1	
Travel Time (s)		14.6			3.6			10.4			3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	27	20	58	51	0	0	4	35	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	47	0	0	109	0	0	39	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Free			Free			Stop			Stop	

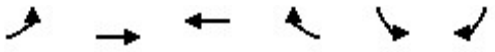
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	25	18	53	47	0	0	4	32	0	0	0
Future Volume (Veh/h)	0	25	18	53	47	0	0	4	32	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	20	58	51	0	0	4	35	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)					226							
pX, platoon unblocked												
vC, conflicting volume	51			47			204	204	37	241	214	51
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51			47			204	204	37	241	214	51
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			100	99	97	100	100	100
cM capacity (veh/h)	1555			1560			733	667	1035	666	658	1017

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	47	109	39	0
Volume Left	0	58	0	0
Volume Right	20	0	35	0
cSH	1555	1560	980	1700
Volume to Capacity	0.00	0.04	0.04	0.00
Queue Length 95th (m)	0.0	0.9	0.9	0.0
Control Delay (s)	0.0	4.1	8.8	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	4.1	8.8	0.0
Approach LOS			A	A

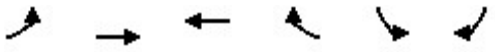
Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	22.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (vph)	0	1825	2633	84	0	119
Future Volume (vph)	0	1825	2633	84	0	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0			35.0	0.0	0.0
Storage Lanes	0			1	0	1
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	*0.80	*0.80	1.00	1.00	1.00
Frt				0.850		0.865
Flt Protected						
Satd. Flow (prot)	0	4520	4520	1601	0	1629
Flt Permitted						
Satd. Flow (perm)	0	4520	4520	1601	0	1629
Link Speed (k/h)		70	70		48	
Link Distance (m)		242.5	206.4		100.7	
Travel Time (s)		12.5	10.6		7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1984	2862	91	0	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1984	2862	91	0	129
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.7	3.7		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.9%		ICU Level of Service C	
Analysis Period (min) 15			

* User Entered Value



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Volume (veh/h)	0	1825	2633	84	0	119
Future Volume (Veh/h)	0	1825	2633	84	0	119
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1984	2862	91	0	129
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)			206			
pX, platoon unblocked	0.67				0.67	0.67
vC, conflicting volume	2953				3523	954
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2199				3047	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	82
cM capacity (veh/h)	159				7	729

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	SB 1
Volume Total	661	661	661	954	954	954	91	129
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	91	129
cSH	1700	1700	1700	1700	1700	1700	1700	729
Volume to Capacity	0.39	0.39	0.39	0.56	0.56	0.56	0.05	0.18
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
Lane LOS								B
Approach Delay (s)	0.0			0.0				11.0
Approach LOS								B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	129	0	1194	968	25
Future Volume (vph)	0	129	0	1194	968	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.865			0.996	
Flt Protected						
Satd. Flow (prot)	0	1629	0	3579	3564	0
Flt Permitted						
Satd. Flow (perm)	0	1629	0	3579	3564	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	105.1			156.1	94.8	
Travel Time (s)	7.9			9.4	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	140	0	1298	1052	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	140	0	1298	1079	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			3.7	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14	24			14
Sign Control	Stop			Free	Free	

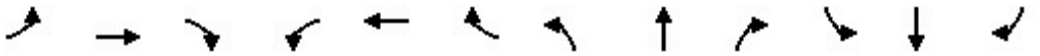
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	129	0	1194	968	25
Future Volume (Veh/h)	0	129	0	1194	968	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	140	0	1298	1052	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				156	95	
pX, platoon unblocked	0.90	0.81	0.81			
vC, conflicting volume	1714	540	1079			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	685	0	623			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	84	100			
cM capacity (veh/h)	342	876	771			

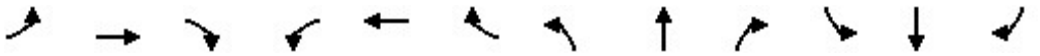
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	140	649	649	701	378
Volume Left	0	0	0	0	0
Volume Right	140	0	0	0	27
cSH	876	1700	1700	1700	1700
Volume to Capacity	0.16	0.38	0.38	0.41	0.22
Queue Length 95th (m)	4.3	0.0	0.0	0.0	0.0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.9	0.0		0.0	
Approach LOS	A				

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	48	0	21	0	14	0	9	23	101	39	0
Future Volume (vph)	0	48	0	21	0	14	0	9	23	101	39	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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					0.947			0.904				
Flt Protected					0.971						0.965	
Satd. Flow (prot)	0	1883	0	0	1732	0	0	1703	0	0	1818	0
Flt Permitted					0.971						0.965	
Satd. Flow (perm)	0	1883	0	0	1732	0	0	1703	0	0	1818	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		51.8			105.1			58.4			90.0	
Travel Time (s)		3.9			7.9			4.4			6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	52	0	23	0	15	0	10	25	110	42	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	38	0	0	35	0	0	152	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)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	48	0	21	0	14	0	9	23	101	39	0
Future Volume (Veh/h)	0	48	0	21	0	14	0	9	23	101	39	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	52	0	23	0	15	0	10	25	110	42	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	300	297	42	310	284	22	42			35		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	300	297	42	310	284	22	42			35		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	91	100	96	100	99	100			93		
cM capacity (veh/h)	609	572	1029	566	581	1054	1567			1576		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	52	38	35	152
Volume Left	0	23	0	110
Volume Right	0	15	25	0
cSH	572	693	1567	1576
Volume to Capacity	0.09	0.05	0.00	0.07
Queue Length 95th (m)	2.3	1.3	0.0	1.7
Control Delay (s)	11.9	10.5	0.0	5.5
Lane LOS	B	B		A
Approach Delay (s)	11.9	10.5	0.0	5.5
Approach LOS	B	B		

Intersection Summary				
Average Delay	6.7			
Intersection Capacity Utilization	29.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	43	0	140	181	0	23
Future Volume (vph)	43	0	140	181	0	23
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					0.865	
Flt Protected				0.979		
Satd. Flow (prot)	1883	0	0	1844	1629	0
Flt Permitted				0.979		
Satd. Flow (perm)	1883	0	0	1844	1629	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	64.1			111.6	90.0	
Travel Time (s)	4.6			8.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	0	152	197	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	349	25	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	43	0	140	181	0	23
Future Volume (Veh/h)	43	0	140	181	0	23
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	0	152	197	0	25
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				112		
pX, platoon unblocked					0.89	
vC, conflicting volume			47		548	47
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			47		427	47
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		100	98
cM capacity (veh/h)			1560		468	1022

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	47	349	25
Volume Left	0	152	0
Volume Right	0	0	25
cSH	1700	1560	1022
Volume to Capacity	0.03	0.10	0.02
Queue Length 95th (m)	0.0	2.5	0.6
Control Delay (s)	0.0	3.8	8.6
Lane LOS		A	A
Approach Delay (s)	0.0	3.8	8.6
Approach LOS			A

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	47	0	36	48	0	71
Future Volume (vph)	47	0	36	48	0	71
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			0.923			
Flt Protected	0.950					
Satd. Flow (prot)	1789	0	1738	0	0	1883
Flt Permitted	0.950					
Satd. Flow (perm)	1789	0	1738	0	0	1883
Link Speed (k/h)	48		48			48
Link Distance (m)	58.5		100.7			139.0
Travel Time (s)	4.4		7.6			10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	0	39	52	0	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	91	0	0	77
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	47	0	36	48	0	71
Future Volume (Veh/h)	47	0	36	48	0	71
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	0	39	52	0	77
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	142	65			91	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	142	65			91	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	100			100	
cM capacity (veh/h)	851	999			1504	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	51	91	77
Volume Left	51	0	0
Volume Right	0	52	0
cSH	851	1700	1504
Volume to Capacity	0.06	0.05	0.00
Queue Length 95th (m)	1.5	0.0	0.0
Control Delay (s)	9.5	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.5	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	32	138	43	53	18
Future Volume (vph)	25	32	138	43	53	18
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	0.924				0.965	
Flt Protected				0.963	0.964	
Satd. Flow (prot)	1740	0	0	1814	1752	0
Flt Permitted				0.963	0.964	
Satd. Flow (perm)	1740	0	0	1814	1752	0
Link Speed (k/h)	50			50	48	
Link Distance (m)	50.4			64.1	33.5	
Travel Time (s)	3.6			4.6	2.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	35	150	47	58	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	0	0	197	78	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	32	138	43	53	18
Future Volume (Veh/h)	25	32	138	43	53	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	35	150	47	58	20
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)				176		
pX, platoon unblocked						
vC, conflicting volume			62		392	44
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			62		392	44
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		90	98
cM capacity (veh/h)			1541		553	1025

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	62	197	78
Volume Left	0	150	58
Volume Right	35	0	20
cSH	1700	1541	627
Volume to Capacity	0.04	0.10	0.12
Queue Length 95th (m)	0.0	2.5	3.2
Control Delay (s)	0.0	6.0	11.6
Lane LOS		A	B
Approach Delay (s)	0.0	6.0	11.6
Approach LOS			B

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	48	39	21	26	32
Future Volume (vph)	0	48	39	21	26	32
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	0.865				0.925	
Flt Protected				0.969	0.978	
Satd. Flow (prot)	1629	0	0	1825	1704	0
Flt Permitted				0.969	0.978	
Satd. Flow (perm)	1629	0	0	1825	1704	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	58.5			53.3	40.3	
Travel Time (s)	4.4			4.0	3.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	52	42	23	28	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	65	63	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	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

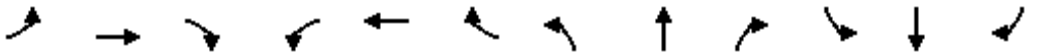
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	0	48	39	21	26	32
Future Volume (Veh/h)	0	48	39	21	26	32
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	52	42	23	28	35
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			52		133	26
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			52		133	26
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		97	97
cM capacity (veh/h)			1554		838	1050

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	52	65	63
Volume Left	0	42	28
Volume Right	52	0	35
cSH	1700	1554	944
Volume to Capacity	0.03	0.03	0.07
Queue Length 95th (m)	0.0	0.6	1.6
Control Delay (s)	0.0	4.8	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	4.8	9.1
Approach LOS			A

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

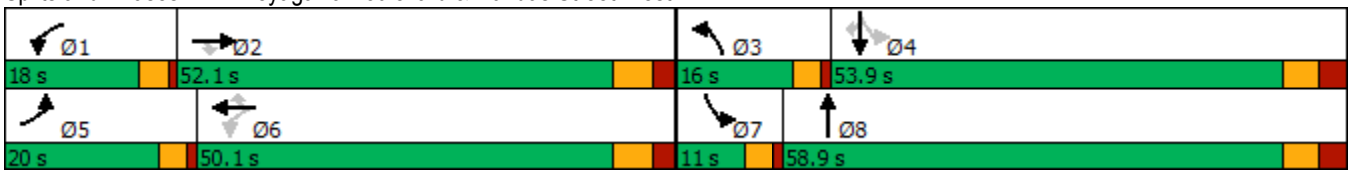


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Future Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1601	1807	4269	1555	3372	3416	0	1755	3476	1585
Flt Permitted	0.950			0.097			0.950			0.507		
Satd. Flow (perm)	3468	4433	1571	184	4269	1534	3368	3416	0	934	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			188			124		26				243
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	374	1370	260	242	1015	44	267	331	86	103	307	414
Shared Lane Traffic (%)												
Lane Group Flow (vph)	374	1370	260	242	1015	44	267	417	0	103	307	414
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	20.0	52.1	52.1	18.0	50.1	50.1	16.0	58.9		11.0	53.9	53.9
Total Split (%)	14.3%	37.2%	37.2%	12.9%	35.8%	35.8%	11.4%	42.1%		7.9%	38.5%	38.5%
Maximum Green (s)	16.0	45.4	45.4	14.0	43.4	43.4	12.0	52.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	15.9	43.0	43.0	58.2	41.3	41.3	12.1	26.9		31.8	21.8	21.8
Actuated g/C Ratio	0.14	0.38	0.38	0.52	0.37	0.37	0.11	0.24		0.28	0.19	0.19
v/c Ratio	0.77	0.81	0.36	0.81	0.65	0.07	0.74	0.50		0.33	0.46	0.83
Control Delay	59.8	37.0	9.8	49.4	33.3	0.2	63.9	36.5		27.8	42.1	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	59.8	37.0	9.8	49.4	33.3	0.2	63.9	36.5		27.8	42.1	32.5
LOS	E	D	A	D	C	A	E	D		C	D	C
Approach Delay		37.7			35.2			47.2			35.5	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 113			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 38.0		Intersection LOS: D	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

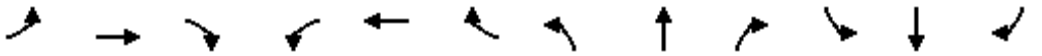




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	374	1370	260	242	1015	44	267	417	103	307	414
v/c Ratio	0.77	0.81	0.36	0.81	0.65	0.07	0.74	0.50	0.33	0.46	0.83
Control Delay	59.8	37.0	9.8	49.4	33.3	0.2	63.9	36.5	27.8	42.1	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	37.0	9.8	49.4	33.3	0.2	63.9	36.5	27.8	42.1	32.5
Queue Length 50th (m)	42.3	110.3	10.1	35.2	76.5	0.0	30.5	40.3	15.7	32.5	38.6
Queue Length 95th (m)	#74.8	160.0	33.9	#93.9	113.0	0.0	#58.1	54.7	27.4	45.3	75.4
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	497	1802	750	298	1659	672	362	1605	314	1463	799
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.76	0.35	0.81	0.61	0.07	0.74	0.26	0.33	0.21	0.52

Intersection Summary

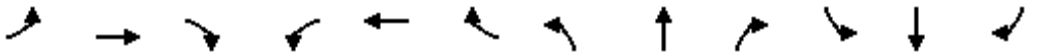
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Future Volume (vph)	359	1315	250	232	974	42	256	318	83	99	295	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1573	1807	4269	1534	3372	3417		1753	3476	1564
Flt Permitted	0.95	1.00	1.00	0.10	1.00	1.00	0.95	1.00		0.51	1.00	1.00
Satd. Flow (perm)	3471	4433	1573	184	4269	1534	3372	3417		936	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	374	1370	260	242	1015	44	267	331	86	103	307	414
RTOR Reduction (vph)	0	0	116	0	0	28	0	20	0	0	0	196
Lane Group Flow (vph)	374	1370	144	242	1015	16	267	397	0	103	307	218
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	15.9	43.0	43.0	55.5	41.3	41.3	12.1	26.9		29.0	21.9	21.9
Effective Green, g (s)	15.9	43.0	43.0	55.5	41.3	41.3	12.1	26.9		29.0	21.9	21.9
Actuated g/C Ratio	0.14	0.38	0.38	0.49	0.37	0.37	0.11	0.24		0.26	0.19	0.19
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	489	1689	599	294	1563	561	361	814		292	674	303
v/s Ratio Prot	c0.11	c0.31		0.10	0.24		c0.08	0.12		0.02	0.09	
v/s Ratio Perm			0.09	0.30		0.01				0.07		c0.14
v/c Ratio	0.76	0.81	0.24	0.82	0.65	0.03	0.74	0.49		0.35	0.46	0.72
Uniform Delay, d1	46.6	31.3	23.8	27.8	29.7	22.9	48.8	37.0		33.1	40.2	42.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	3.1	0.2	16.8	0.9	0.0	7.7	0.5		0.7	0.5	8.2
Delay (s)	53.7	34.3	24.0	44.6	30.7	22.9	56.6	37.5		33.8	40.7	50.7
Level of Service	D	C	C	D	C	C	E	D		C	D	D
Approach Delay (s)		36.6			33.0			44.9			44.9	
Approach LOS		D			C			D			D	

Intersection Summary					
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.78				
Actuated Cycle Length (s)	112.8	Sum of lost time (s)	21.6		
Intersection Capacity Utilization	80.8%	ICU Level of Service	D		
Analysis Period (min)	15				

c Critical Lane Group

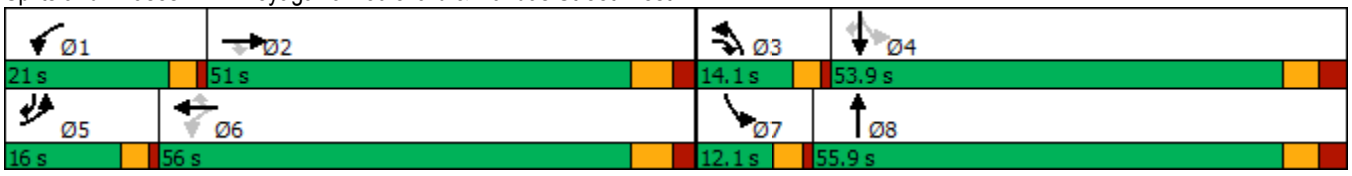


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Future Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1617	1825	4476	1541	3471	3477	0	1807	3579	1585
Flt Permitted	0.950			0.133			0.950			0.234		
Satd. Flow (perm)	3471	4433	1588	255	4476	1521	3465	3477	0	442	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			241			93		24				91
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	357	1040	244	295	1705	80	317	483	119	97	348	466
Shared Lane Traffic (%)												
Lane Group Flow (vph)	357	1040	244	295	1705	80	317	602	0	97	348	466
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	3	1	6	6	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	7.0
Minimum Split (s)	11.0	49.7	11.0	11.0	49.7	49.7	11.0	53.9		11.0	53.9	11.0
Total Split (s)	16.0	51.0	14.1	21.0	56.0	56.0	14.1	55.9		12.1	53.9	16.0
Total Split (%)	11.4%	36.4%	10.1%	15.0%	40.0%	40.0%	10.1%	39.9%		8.6%	38.5%	11.4%
Maximum Green (s)	12.0	44.3	10.1	17.0	49.3	49.3	10.1	49.0		8.1	47.0	12.0
Yellow Time (s)	3.0	4.2	3.0	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.0
All-Red Time (s)	1.0	2.5	1.0	1.0	2.5	2.5	1.0	3.2		1.0	3.2	1.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	-2.0	0.0	-2.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		36.0			36.0	36.0		40.0			40.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	14.0	44.4	57.2	68.2	51.4	49.4	12.1	25.2		33.8	23.0	37.9
Actuated g/C Ratio	0.12	0.38	0.49	0.59	0.44	0.43	0.10	0.22		0.29	0.20	0.33
v/c Ratio	0.85	0.61	0.27	0.78	0.86	0.11	0.88	0.78		0.44	0.49	0.81
Control Delay	70.3	31.5	2.9	35.1	35.4	3.9	76.7	48.6		32.5	43.5	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	70.3	31.5	2.9	35.1	35.4	3.9	76.7	48.6		32.5	43.5	38.3
LOS	E	C	A	D	D	A	E	D		C	D	D
Approach Delay		35.7			34.1			58.3			39.7	
Approach LOS		D			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 116.2			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 39.5		Intersection LOS: D	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

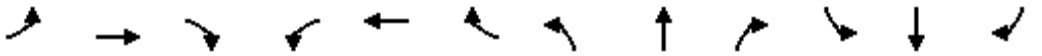




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	357	1040	244	295	1705	80	317	602	97	348	466
v/c Ratio	0.85	0.61	0.27	0.78	0.86	0.11	0.88	0.78	0.44	0.49	0.81
Control Delay	70.3	31.5	2.9	35.1	35.4	3.9	76.7	48.6	32.5	43.5	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	31.5	2.9	35.1	35.4	3.9	76.7	48.6	32.5	43.5	38.3
Queue Length 50th (m)	41.6	78.7	0.3	36.6	142.7	0.0	37.2	65.8	15.2	37.3	74.8
Queue Length 95th (m)	#72.3	105.7	13.3	#86.6	#189.2	7.5	#67.4	85.4	27.0	51.2	112.8
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	419	1694	907	379	1980	700	362	1483	224	1451	573
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.61	0.27	0.78	0.86	0.11	0.88	0.41	0.43	0.24	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Future Volume (vph)	343	998	234	283	1637	77	304	464	114	93	334	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1595	1825	4476	1521	3471	3481		1805	3579	1571
Flt Permitted	0.95	1.00	1.00	0.13	1.00	1.00	0.95	1.00		0.23	1.00	1.00
Satd. Flow (perm)	3471	4433	1595	255	4476	1521	3471	3481		444	3579	1571
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	357	1040	244	295	1705	80	317	483	119	97	348	466
RTOR Reduction (vph)	0	0	128	0	0	46	0	19	0	0	0	64
Lane Group Flow (vph)	357	1040	116	295	1705	34	317	583	0	97	348	402
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	12.0	44.4	54.5	65.4	49.4	49.4	10.1	25.2		30.9	23.0	35.0
Effective Green, g (s)	14.0	44.4	54.5	65.4	51.4	49.4	12.1	25.2		30.9	23.0	35.0
Actuated g/C Ratio	0.12	0.38	0.47	0.56	0.44	0.43	0.10	0.22		0.27	0.20	0.30
Clearance Time (s)	4.0	6.7	4.0	4.0	6.7	6.7	4.0	6.9		4.0	6.9	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	418	1695	748	373	1981	647	361	755		210	709	473
v/s Ratio Prot	c0.10	0.23	0.01	c0.12	c0.38		c0.09	0.17		0.03	0.10	c0.09
v/s Ratio Perm			0.06	0.33		0.02				0.09		0.17
v/c Ratio	0.85	0.61	0.16	0.79	0.86	0.05	0.88	0.77		0.46	0.49	0.85
Uniform Delay, d1	50.0	28.9	17.6	21.6	29.1	19.6	51.3	42.8		33.6	41.3	38.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.5	0.7	0.1	10.9	4.1	0.0	20.7	4.9		1.6	0.5	13.7
Delay (s)	65.5	29.6	17.7	32.5	33.2	19.6	71.9	47.7		35.2	41.9	51.8
Level of Service	E	C	B	C	C	B	E	D		D	D	D
Approach Delay (s)		35.6			32.6			56.0			46.2	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	116.1	Sum of lost time (s)	21.6
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		

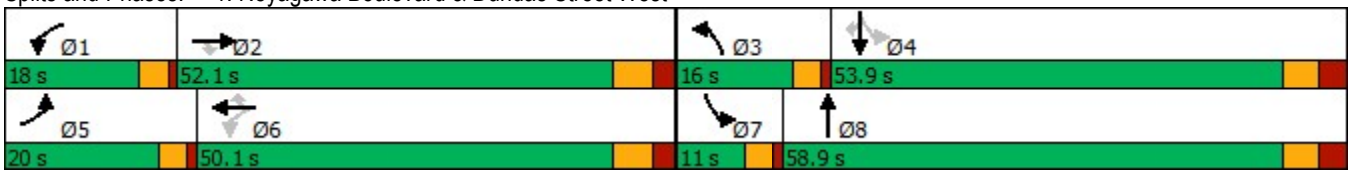
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Future Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1601	1807	4269	1555	3372	3419	0	1755	3476	1585
Flt Permitted	0.950			0.097			0.950			0.496		
Satd. Flow (perm)	3468	4433	1571	184	4269	1534	3368	3419	0	914	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			188			124		25				243
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	398	1370	260	242	1016	56	267	340	86	130	334	417
Shared Lane Traffic (%)												
Lane Group Flow (vph)	398	1370	260	242	1016	56	267	426	0	130	334	417
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	20.0	52.1	52.1	18.0	50.1	50.1	16.0	58.9		11.0	53.9	53.9
Total Split (%)	14.3%	37.2%	37.2%	12.9%	35.8%	35.8%	11.4%	42.1%		7.9%	38.5%	38.5%
Maximum Green (s)	16.0	45.4	45.4	14.0	43.4	43.4	12.0	52.0		7.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	16.2	43.1	43.1	58.0	41.1	41.1	12.1	27.4		32.4	22.4	22.4
Actuated g/C Ratio	0.14	0.38	0.38	0.51	0.36	0.36	0.11	0.24		0.29	0.20	0.20
v/c Ratio	0.81	0.81	0.37	0.82	0.66	0.09	0.74	0.51		0.42	0.49	0.83
Control Delay	62.3	37.4	10.0	50.3	33.9	0.3	64.5	36.6		30.0	42.5	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	62.3	37.4	10.0	50.3	33.9	0.3	64.5	36.6		30.0	42.5	32.3
LOS	E	D	A	D	C	A	E	D		C	D	C
Approach Delay		38.8			35.5			47.4			35.8	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 113.6			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 38.6		Intersection LOS: D	
Intersection Capacity Utilization 82.1%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

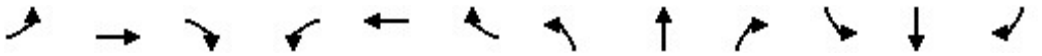




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	398	1370	260	242	1016	56	267	426	130	334	417
v/c Ratio	0.81	0.81	0.37	0.82	0.66	0.09	0.74	0.51	0.42	0.49	0.83
Control Delay	62.3	37.4	10.0	50.3	33.9	0.3	64.5	36.6	30.0	42.5	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.3	37.4	10.0	50.3	33.9	0.3	64.5	36.6	30.0	42.5	32.3
Queue Length 50th (m)	45.4	110.7	10.1	35.3	76.9	0.0	30.5	41.5	20.2	35.7	39.5
Queue Length 95th (m)	#83.6	162.7	34.4	#95.5	115.0	0.0	#59.0	56.0	33.4	48.9	76.5
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	494	1792	747	296	1650	669	360	1597	313	1455	795
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.76	0.35	0.82	0.62	0.08	0.74	0.27	0.42	0.23	0.52

Intersection Summary

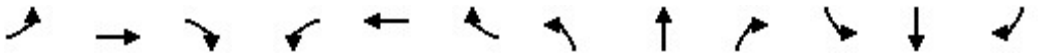
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Future Volume (vph)	382	1315	250	232	975	54	256	326	83	125	321	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1573	1807	4269	1534	3372	3419		1753	3476	1564
Flt Permitted	0.95	1.00	1.00	0.10	1.00	1.00	0.95	1.00		0.50	1.00	1.00
Satd. Flow (perm)	3471	4433	1573	185	4269	1534	3372	3419		915	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	398	1370	260	242	1016	56	267	340	86	130	334	417
RTOR Reduction (vph)	0	0	117	0	0	36	0	19	0	0	0	195
Lane Group Flow (vph)	398	1370	143	242	1016	20	267	407	0	130	334	222
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	16.2	43.1	43.1	55.3	41.1	41.1	12.1	27.4		29.5	22.4	22.4
Effective Green, g (s)	16.2	43.1	43.1	55.3	41.1	41.1	12.1	27.4		29.5	22.4	22.4
Actuated g/C Ratio	0.14	0.38	0.38	0.49	0.36	0.36	0.11	0.24		0.26	0.20	0.20
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	495	1684	597	293	1547	555	359	826		290	686	308
v/s Ratio Prot	c0.11	c0.31		0.10	0.24		c0.08	0.12		0.03	0.10	
v/s Ratio Perm			0.09	0.30		0.01				0.09		c0.14
v/c Ratio	0.80	0.81	0.24	0.83	0.66	0.04	0.74	0.49		0.45	0.49	0.72
Uniform Delay, d1	47.1	31.5	24.0	28.0	30.2	23.4	49.1	37.0		33.5	40.4	42.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.2	3.1	0.2	17.0	1.0	0.0	8.1	0.5		1.1	0.5	8.1
Delay (s)	56.3	34.7	24.2	45.1	31.3	23.4	57.2	37.5		34.6	40.9	50.6
Level of Service	E	C	C	D	C	C	E	D		C	D	D
Approach Delay (s)		37.6			33.5			45.1			44.6	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	113.4	Sum of lost time (s)	21.6
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

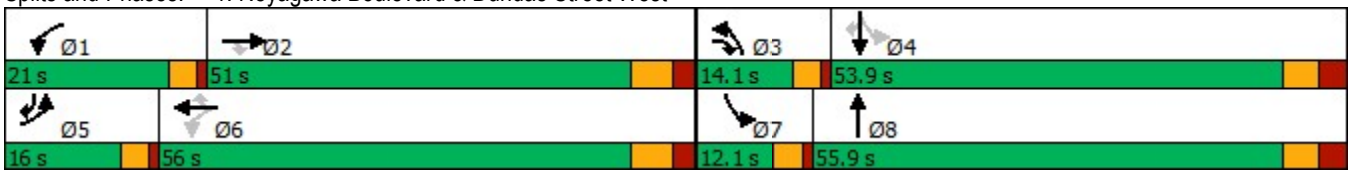


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Future Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1617	1825	4476	1541	3471	3485	0	1807	3579	1585
Flt Permitted	0.950			0.131			0.950			0.218		
Satd. Flow (perm)	3471	4433	1588	251	4476	1521	3466	3485	0	412	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			228			93		22				91
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	377	1040	244	295	1709	135	317	509	119	121	363	469
Shared Lane Traffic (%)												
Lane Group Flow (vph)	377	1040	244	295	1709	135	317	628	0	121	363	469
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	3	1	6	6	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	7.0
Minimum Split (s)	11.0	49.7	11.0	11.0	49.7	49.7	11.0	53.9		11.0	53.9	11.0
Total Split (s)	16.0	51.0	14.1	21.0	56.0	56.0	14.1	55.9		12.1	53.9	16.0
Total Split (%)	11.4%	36.4%	10.1%	15.0%	40.0%	40.0%	10.1%	39.9%		8.6%	38.5%	11.4%
Maximum Green (s)	12.0	44.3	10.1	17.0	49.3	49.3	10.1	49.0		8.1	47.0	12.0
Yellow Time (s)	3.0	4.2	3.0	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.0
All-Red Time (s)	1.0	2.5	1.0	1.0	2.5	2.5	1.0	3.2		1.0	3.2	1.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	-2.0	0.0	-2.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		36.0			36.0	36.0		40.0			40.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	14.0	44.4	57.2	68.2	51.4	49.4	12.1	26.3		35.1	24.2	39.1
Actuated g/C Ratio	0.12	0.38	0.49	0.58	0.44	0.42	0.10	0.22		0.30	0.21	0.33
v/c Ratio	0.91	0.62	0.27	0.79	0.87	0.19	0.89	0.79		0.56	0.49	0.80
Control Delay	78.5	32.3	3.5	36.8	36.7	9.2	78.7	49.0		36.7	43.2	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	78.5	32.3	3.5	36.8	36.7	9.2	78.7	49.0		36.7	43.2	37.4
LOS	E	C	A	D	D	A	E	D		D	D	D
Approach Delay		38.5			35.0			59.0			39.5	
Approach LOS		D			C			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 117.4			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 40.7		Intersection LOS: D	
Intersection Capacity Utilization 93.7%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

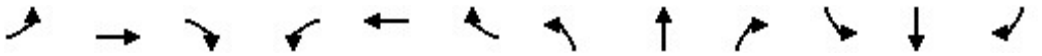




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	377	1040	244	295	1709	135	317	628	121	363	469
v/c Ratio	0.91	0.62	0.27	0.79	0.87	0.19	0.89	0.79	0.56	0.49	0.80
Control Delay	78.5	32.3	3.5	36.8	36.7	9.2	78.7	49.0	36.7	43.2	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.5	32.3	3.5	36.8	36.7	9.2	78.7	49.0	36.7	43.2	37.4
Queue Length 50th (m)	44.7	80.0	1.7	37.9	145.8	5.7	37.6	69.6	19.2	39.0	75.5
Queue Length 95th (m)	#78.7	107.4	15.3	#89.5	#202.3	19.4	#68.3	89.5	32.5	53.3	113.9
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	414	1676	893	374	1960	693	358	1470	220	1436	583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.62	0.27	0.79	0.87	0.19	0.89	0.43	0.55	0.25	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Future Volume (vph)	362	998	234	283	1641	130	304	489	114	116	348	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1595	1825	4476	1521	3471	3486		1805	3579	1570
Flt Permitted	0.95	1.00	1.00	0.13	1.00	1.00	0.95	1.00		0.22	1.00	1.00
Satd. Flow (perm)	3471	4433	1595	252	4476	1521	3471	3486		413	3579	1570
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	377	1040	244	295	1709	135	317	509	119	121	362	469
RTOR Reduction (vph)	0	0	122	0	0	54	0	17	0	0	0	63
Lane Group Flow (vph)	377	1040	122	295	1709	81	317	611	0	121	363	406
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	12.0	44.4	54.5	65.4	49.4	49.4	10.1	26.3		32.2	24.2	36.2
Effective Green, g (s)	14.0	44.4	54.5	65.4	51.4	49.4	12.1	26.3		32.2	24.2	36.2
Actuated g/C Ratio	0.12	0.38	0.46	0.56	0.44	0.42	0.10	0.22		0.27	0.21	0.31
Clearance Time (s)	4.0	6.7	4.0	4.0	6.7	6.7	4.0	6.9		4.0	6.9	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	414	1677	741	368	1961	640	358	781		208	738	484
v/s Ratio Prot	c0.11	0.23	0.01	c0.12	c0.38		c0.09	c0.18		0.04	0.10	0.09
v/s Ratio Perm			0.06	0.33		0.05				0.12		0.17
v/c Ratio	0.91	0.62	0.16	0.80	0.87	0.13	0.89	0.78		0.58	0.49	0.84
Uniform Delay, d1	51.0	29.6	18.2	22.5	29.9	20.8	51.9	42.8		33.8	41.1	37.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.8	0.7	0.1	11.9	4.6	0.1	22.0	5.1		4.1	0.5	12.1
Delay (s)	74.8	30.3	18.3	34.4	34.5	20.9	73.9	47.9		37.8	41.6	49.9
Level of Service	E	C	B	C	C	C	E	D		D	D	D
Approach Delay (s)		38.7			33.6			56.7			45.2	
Approach LOS		D			C			E			D	

Intersection Summary					
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.93				
Actuated Cycle Length (s)	117.3	Sum of lost time (s)		21.6	
Intersection Capacity Utilization	93.7%	ICU Level of Service		F	
Analysis Period (min)	15				

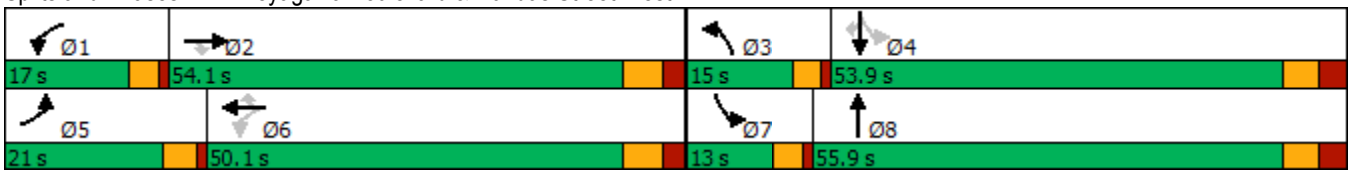
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Future Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1601	1807	4269	1555	3372	3416	0	1755	3476	1585
Flt Permitted	0.950			0.097			0.950			0.428		
Satd. Flow (perm)	3469	4433	1571	184	4269	1534	3368	3416	0	788	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			93		26				225
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	388	1425	271	251	1053	46	278	345	90	107	319	430
Shared Lane Traffic (%)												
Lane Group Flow (vph)	388	1425	271	251	1053	46	278	435	0	107	319	430
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	9.5	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	21.0	54.1	54.1	17.0	50.1	50.1	15.0	55.9		13.0	53.9	53.9
Total Split (%)	15.0%	38.6%	38.6%	12.1%	35.8%	35.8%	10.7%	39.9%		9.3%	38.5%	38.5%
Maximum Green (s)	16.5	47.4	47.4	13.0	43.4	43.4	11.0	49.0		9.0	47.0	47.0
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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)	4.5	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	16.5	44.9	44.9	57.1	41.2	41.2	11.2	27.0		36.2	24.5	24.5
Actuated g/C Ratio	0.14	0.39	0.39	0.49	0.36	0.36	0.10	0.23		0.31	0.21	0.21
v/c Ratio	0.79	0.83	0.37	0.91	0.69	0.08	0.86	0.53		0.34	0.43	0.85
Control Delay	62.1	38.1	10.2	67.0	36.0	0.2	77.6	38.4		27.4	40.7	36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	62.1	38.1	10.2	67.0	36.0	0.2	77.6	38.4		27.4	40.7	36.0
LOS	E	D	B	E	D	A	E	D		C	D	D
Approach Delay		38.9			40.6			53.7			36.7	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 115.8			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 41.1		Intersection LOS: D	
Intersection Capacity Utilization 82.5%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

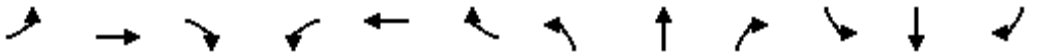




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	388	1425	271	251	1053	46	278	435	107	319	430
v/c Ratio	0.79	0.83	0.37	0.91	0.69	0.08	0.86	0.53	0.34	0.43	0.85
Control Delay	62.1	38.1	10.2	67.0	36.0	0.2	77.6	38.4	27.4	40.7	36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.1	38.1	10.2	67.0	36.0	0.2	77.6	38.4	27.4	40.7	36.0
Queue Length 50th (m)	45.2	118.9	11.1	40.0	84.0	0.0	33.1	44.0	16.6	33.9	48.1
Queue Length 95th (m)	#82.1	#177.2	36.8	#109.5	125.1	0.2	#68.6	58.9	28.5	46.7	85.9
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	502	1843	765	275	1625	641	325	1483	325	1433	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.77	0.35	0.91	0.65	0.07	0.86	0.29	0.33	0.22	0.55

Intersection Summary

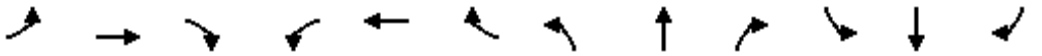
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Future Volume (vph)	372	1368	260	241	1011	44	267	331	86	103	306	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1573	1807	4269	1534	3372	3416		1753	3476	1564
Flt Permitted	0.95	1.00	1.00	0.10	1.00	1.00	0.95	1.00		0.43	1.00	1.00
Satd. Flow (perm)	3471	4433	1573	185	4269	1534	3372	3416		790	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	388	1425	271	251	1053	46	278	345	90	107	319	430
RTOR Reduction (vph)	0	0	118	0	0	30	0	20	0	0	0	177
Lane Group Flow (vph)	388	1425	153	251	1053	16	278	415	0	107	319	253
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	16.5	45.0	45.0	54.4	41.2	41.2	11.2	27.0		33.2	24.5	24.5
Effective Green, g (s)	16.5	45.0	45.0	54.4	41.2	41.2	11.2	27.0		33.2	24.5	24.5
Actuated g/C Ratio	0.14	0.39	0.39	0.47	0.36	0.36	0.10	0.23		0.29	0.21	0.21
Clearance Time (s)	4.5	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	495	1727	612	272	1522	547	326	798		299	737	331
v/s Ratio Prot	0.11	c0.32		c0.11	0.25		c0.08	0.12		0.03	0.09	
v/s Ratio Perm			0.10	c0.33		0.01				0.08		c0.16
v/c Ratio	0.78	0.83	0.25	0.92	0.69	0.03	0.85	0.52		0.36	0.43	0.76
Uniform Delay, d1	47.8	31.7	23.8	30.7	31.7	24.2	51.3	38.6		31.3	39.5	42.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.9	3.4	0.2	34.6	1.4	0.0	18.9	0.6		0.7	0.4	10.0
Delay (s)	55.7	35.1	24.1	65.2	33.1	24.2	70.2	39.2		32.0	39.9	52.8
Level of Service	E	D	C	E	C	C	E	D		C	D	D
Approach Delay (s)		37.5			38.8			51.3			45.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	115.5	Sum of lost time (s)	22.1
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

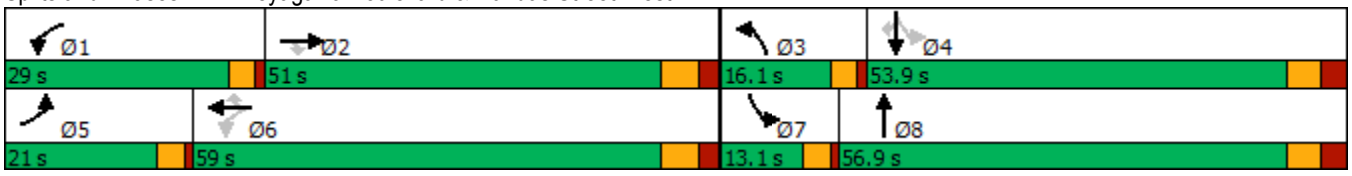


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Future Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1617	1825	4476	1541	3471	3476	0	1807	3579	1585
Flt Permitted	0.950			0.109			0.950			0.252		
Satd. Flow (perm)	3471	4433	1587	209	4476	1520	3465	3476	0	476	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			208			87		22				251
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	370	1082	253	306	1771	83	329	500	124	101	361	484
Shared Lane Traffic (%)												
Lane Group Flow (vph)	370	1082	253	306	1771	83	329	624	0	101	361	484
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	21.0	51.0	51.0	29.0	59.0	59.0	16.1	56.9		13.1	53.9	53.9
Total Split (%)	14.0%	34.0%	34.0%	19.3%	39.3%	39.3%	10.7%	37.9%		8.7%	35.9%	35.9%
Maximum Green (s)	17.0	44.3	44.3	25.0	52.3	52.3	12.1	50.0		9.1	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	-2.0	0.0	-2.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	6.7	4.0	4.7	6.7	2.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	18.5	48.0	48.0	74.6	54.7	52.7	14.2	33.7		41.9	30.3	30.3
Actuated g/C Ratio	0.14	0.36	0.36	0.56	0.41	0.40	0.11	0.25		0.31	0.23	0.23
v/c Ratio	0.77	0.68	0.36	0.82	0.96	0.13	0.89	0.70		0.43	0.45	0.88
Control Delay	68.2	41.3	9.8	47.8	53.4	6.1	85.6	47.4		33.0	45.2	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	68.2	41.3	9.8	47.8	53.4	6.1	85.6	47.4		33.0	45.2	41.5
LOS	E	D	A	D	D	A	F	D		C	D	D
Approach Delay		42.5			50.8			60.6			42.0	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 133.4			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 48.5		Intersection LOS: D	
Intersection Capacity Utilization 94.0%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

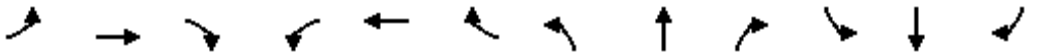




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	370	1082	253	306	1771	83	329	624	101	361	484
v/c Ratio	0.77	0.68	0.36	0.82	0.96	0.13	0.89	0.70	0.43	0.45	0.88
Control Delay	68.2	41.3	9.8	47.8	53.4	6.1	85.6	47.4	33.0	45.2	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	41.3	9.8	47.8	53.4	6.1	85.6	47.4	33.0	45.2	41.5
Queue Length 50th (m)	48.8	103.0	8.0	52.7	188.2	0.0	44.7	76.4	17.6	43.2	64.5
Queue Length 95th (m)	#80.4	146.3	32.9	#109.9	#279.7	10.7	#84.1	95.5	29.7	57.3	108.8
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	498	1593	703	424	1836	653	369	1326	242	1270	716
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.68	0.36	0.72	0.96	0.13	0.89	0.47	0.42	0.28	0.68

Intersection Summary

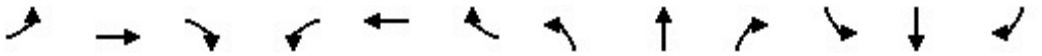
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Future Volume (vph)	355	1039	243	294	1700	80	316	480	119	97	347	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	6.7	4.0	4.7	6.7	2.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1589	1825	4476	1521	3471	3478		1804	3579	1562
Flt Permitted	0.95	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.25	1.00	1.00
Satd. Flow (perm)	3471	4433	1589	209	4476	1521	3471	3478		478	3579	1562
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	370	1082	253	306	1771	83	329	500	124	101	361	484
RTOR Reduction (vph)	0	0	133	0	0	50	0	16	0	0	0	194
Lane Group Flow (vph)	370	1082	120	306	1771	33	329	608	0	101	361	290
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	16.5	48.0	48.0	73.2	52.7	52.7	12.2	33.7		39.1	30.3	30.3
Effective Green, g (s)	18.5	48.0	48.0	73.2	54.7	52.7	14.2	33.7		39.1	30.3	30.3
Actuated g/C Ratio	0.14	0.36	0.36	0.55	0.41	0.40	0.11	0.25		0.29	0.23	0.23
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	481	1596	572	371	1836	601	369	879		227	813	355
v/s Ratio Prot	0.11	0.24		c0.13	c0.40		c0.09	0.17		0.03	0.10	
v/s Ratio Perm			0.08	0.32		0.02				0.10		c0.19
v/c Ratio	0.77	0.68	0.21	0.82	0.96	0.05	0.89	0.69		0.44	0.44	0.82
Uniform Delay, d1	55.3	36.1	29.5	32.1	38.4	24.9	58.8	45.1		35.9	44.3	48.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.3	1.2	0.2	13.8	13.5	0.0	22.6	2.4		1.4	0.4	13.5
Delay (s)	62.6	37.3	29.7	45.9	51.9	24.9	81.4	47.5		37.3	44.6	62.4
Level of Service	E	D	C	D	D	C	F	D		D	D	E
Approach Delay (s)		41.6			50.0			59.2			52.9	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	49.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	133.3	Sum of lost time (s)	21.6
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

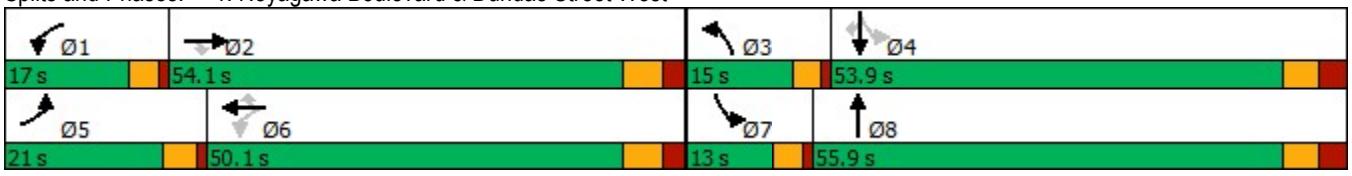


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Future Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1601	1807	4269	1555	3372	3419	0	1755	3476	1585
Flt Permitted	0.950			0.097			0.950			0.399		
Satd. Flow (perm)	3469	4433	1571	184	4269	1534	3368	3419	0	735	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193			93		24				225
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	423	1425	271	251	1054	70	278	365	90	159	371	433
Shared Lane Traffic (%)												
Lane Group Flow (vph)	423	1425	271	251	1054	70	278	455	0	159	371	433
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	9.5	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	21.0	54.1	54.1	17.0	50.1	50.1	15.0	55.9		13.0	53.9	53.9
Total Split (%)	15.0%	38.6%	38.6%	12.1%	35.8%	35.8%	10.7%	39.9%		9.3%	38.5%	38.5%
Maximum Green (s)	16.5	47.4	47.4	13.0	43.4	43.4	11.0	49.0		9.0	47.0	47.0
Yellow Time (s)	3.5	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
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)	4.5	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	16.7	45.1	45.1	57.0	41.1	41.1	11.2	27.6		37.6	25.5	25.5
Actuated g/C Ratio	0.14	0.39	0.39	0.49	0.35	0.35	0.10	0.24		0.32	0.22	0.22
v/c Ratio	0.85	0.83	0.37	0.92	0.70	0.12	0.87	0.55		0.50	0.49	0.84
Control Delay	67.5	38.7	10.3	69.3	36.8	3.5	79.4	39.1		31.6	41.6	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	67.5	38.7	10.3	69.3	36.8	3.5	79.4	39.1		31.6	41.6	35.2
LOS	E	D	B	E	D	A	E	D		C	D	D
Approach Delay		40.8			41.0			54.4			37.0	
Approach LOS		D			D			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 116.9			
Natural Cycle: 140			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 42.1		Intersection LOS: D	
Intersection Capacity Utilization 85.6%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

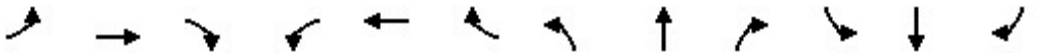




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	423	1425	271	251	1054	70	278	455	159	371	433
v/c Ratio	0.85	0.83	0.37	0.92	0.70	0.12	0.87	0.55	0.50	0.49	0.84
Control Delay	67.5	38.7	10.3	69.3	36.8	3.5	79.4	39.1	31.6	41.6	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	38.7	10.3	69.3	36.8	3.5	79.4	39.1	31.6	41.6	35.2
Queue Length 50th (m)	50.0	119.4	11.2	40.2	84.5	0.0	33.3	46.7	25.5	40.1	48.9
Queue Length 95th (m)	#93.2	#178.5	36.9	#109.9	125.5	6.3	#68.6	62.0	40.4	54.0	87.3
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	496	1822	759	272	1606	635	321	1466	315	1416	770
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.78	0.36	0.92	0.66	0.11	0.87	0.31	0.50	0.26	0.56

Intersection Summary

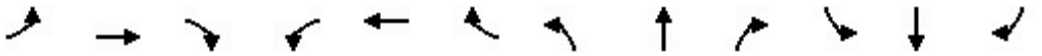
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Future Volume (vph)	406	1368	260	241	1012	67	267	350	86	153	356	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1573	1807	4269	1534	3372	3421		1753	3476	1564
Flt Permitted	0.95	1.00	1.00	0.10	1.00	1.00	0.95	1.00		0.40	1.00	1.00
Satd. Flow (perm)	3471	4433	1573	185	4269	1534	3372	3421		736	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	423	1425	271	251	1054	70	278	365	90	159	371	433
RTOR Reduction (vph)	0	0	118	0	0	45	0	18	0	0	0	176
Lane Group Flow (vph)	423	1425	153	251	1054	25	278	437	0	159	371	257
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	16.7	45.1	45.1	54.3	41.1	41.1	11.1	27.6		34.7	25.6	25.6
Effective Green, g (s)	16.7	45.1	45.1	54.3	41.1	41.1	11.1	27.6		34.7	25.6	25.6
Actuated g/C Ratio	0.14	0.39	0.39	0.47	0.35	0.35	0.10	0.24		0.30	0.22	0.22
Clearance Time (s)	4.5	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	497	1714	608	269	1504	540	321	809		298	763	343
v/s Ratio Prot	c0.12	c0.32		0.11	0.25		c0.08	0.13		0.04	0.11	
v/s Ratio Perm			0.10	c0.33		0.02				0.12		c0.16
v/c Ratio	0.85	0.83	0.25	0.93	0.70	0.05	0.87	0.54		0.53	0.49	0.75
Uniform Delay, d1	48.7	32.3	24.3	31.2	32.5	24.8	52.0	38.9		31.7	39.8	42.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.2	3.6	0.2	37.1	1.5	0.0	20.9	0.7		1.8	0.5	8.9
Delay (s)	61.9	35.9	24.5	68.3	34.0	24.9	72.9	39.6		33.6	40.2	51.4
Level of Service	E	D	C	E	C	C	E	D		C	D	D
Approach Delay (s)		39.6			39.8			52.3			44.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	116.6	Sum of lost time (s)	22.1
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

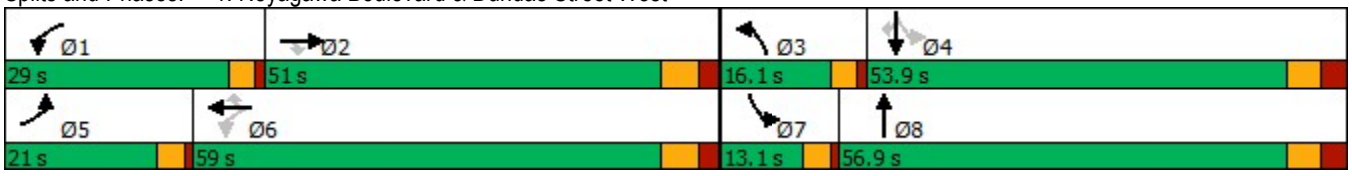


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Future Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1617	1825	4476	1541	3471	3485	0	1807	3579	1585
Flt Permitted	0.950			0.107			0.950			0.217		
Satd. Flow (perm)	3471	4433	1587	205	4476	1520	3465	3485	0	410	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			208			96		20				251
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	442	1082	253	306	1775	168	329	544	124	146	389	488
Shared Lane Traffic (%)												
Lane Group Flow (vph)	442	1082	253	306	1775	168	329	668	0	146	389	488
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	21.0	51.0	51.0	29.0	59.0	59.0	16.1	56.9		13.1	53.9	53.9
Total Split (%)	14.0%	34.0%	34.0%	19.3%	39.3%	39.3%	10.7%	37.9%		8.7%	35.9%	35.9%
Maximum Green (s)	17.0	44.3	44.3	25.0	52.3	52.3	12.1	50.0		9.1	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	-2.0	0.0	-2.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	6.7	4.0	4.7	6.7	2.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	19.1	48.3	48.3	74.7	54.6	52.6	14.2	34.6		43.7	31.6	31.6
Actuated g/C Ratio	0.14	0.36	0.36	0.55	0.40	0.39	0.11	0.26		0.32	0.23	0.23
v/c Ratio	0.90	0.68	0.36	0.83	0.98	0.26	0.90	0.74		0.65	0.47	0.88
Control Delay	80.1	42.0	9.9	49.6	57.5	14.7	88.6	49.3		42.7	45.6	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	80.1	42.0	9.9	49.6	57.5	14.7	88.6	49.3		42.7	45.6	40.8
LOS	F	D	A	D	E	B	F	D		D	D	D
Approach Delay		46.9			53.2			62.2			42.9	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 135.2			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 51.1		Intersection LOS: D	
Intersection Capacity Utilization 98.5%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

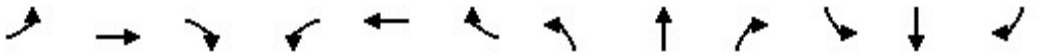




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	442	1082	253	306	1775	168	329	668	146	389	488
v/c Ratio	0.90	0.68	0.36	0.83	0.98	0.26	0.90	0.74	0.65	0.47	0.88
Control Delay	80.1	42.0	9.9	49.6	57.5	14.7	88.6	49.3	42.7	45.6	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	42.0	9.9	49.6	57.5	14.7	88.6	49.3	42.7	45.6	40.8
Queue Length 50th (m)	60.4	105.1	8.2	54.2	192.5	12.2	45.3	83.6	26.2	47.0	66.0
Queue Length 95th (m)	#104.9	146.3	32.9	#110.8	#281.0	33.0	#84.1	103.5	41.0	61.6	110.5
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	490	1582	700	417	1808	649	364	1309	227	1251	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.68	0.36	0.73	0.98	0.26	0.90	0.51	0.64	0.31	0.69

Intersection Summary

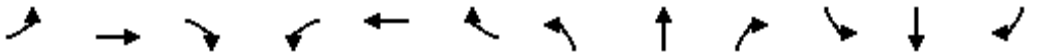
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Future Volume (vph)	424	1039	243	294	1704	161	316	522	119	140	373	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	6.7	4.0	4.7	6.7	2.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1588	1825	4476	1521	3471	3487		1805	3579	1562
Flt Permitted	0.95	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.22	1.00	1.00
Satd. Flow (perm)	3471	4433	1588	206	4476	1521	3471	3487		412	3579	1562
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	442	1082	253	306	1775	168	329	544	124	146	389	488
RTOR Reduction (vph)	0	0	134	0	0	59	0	15	0	0	0	192
Lane Group Flow (vph)	442	1082	119	306	1775	109	329	653	0	146	389	296
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	17.1	48.3	48.3	73.7	52.6	52.6	12.2	34.7		40.7	31.6	31.6
Effective Green, g (s)	19.1	48.3	48.3	73.7	54.6	52.6	14.2	34.7		40.7	31.6	31.6
Actuated g/C Ratio	0.14	0.36	0.36	0.55	0.40	0.39	0.11	0.26		0.30	0.23	0.23
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	490	1584	567	368	1808	592	364	895		217	837	365
v/s Ratio Prot	c0.13	0.24		c0.13	c0.40		c0.09	0.19		0.05	0.11	
v/s Ratio Perm			0.08	0.32		0.07				0.16		c0.19
v/c Ratio	0.90	0.68	0.21	0.83	0.98	0.18	0.90	0.73		0.67	0.46	0.81
Uniform Delay, d1	57.1	36.9	30.2	33.1	39.8	27.1	59.8	45.9		36.8	44.5	48.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.7	1.2	0.2	14.7	16.9	0.2	24.8	3.0		8.0	0.4	12.7
Delay (s)	76.7	38.1	30.3	47.8	56.7	27.3	84.6	48.9		44.8	44.9	61.7
Level of Service	E	D	C	D	E	C	F	D		D	D	E
Approach Delay (s)		46.6			53.3			60.7			52.9	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	52.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	135.1	Sum of lost time (s)	21.6
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

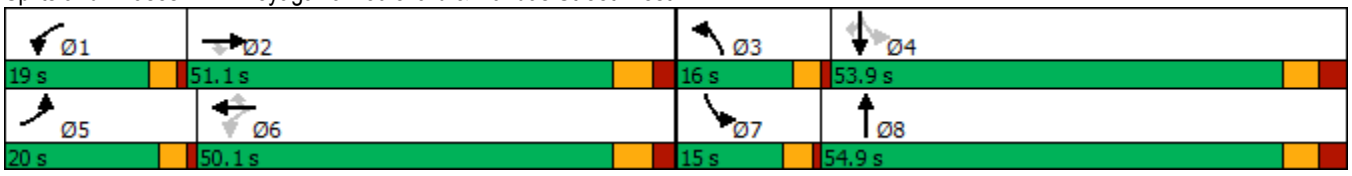


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Future Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98			0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1601	1807	4269	1555	3372	3416	0	1755	3476	1585
Flt Permitted	0.950			0.091			0.950			0.394		
Satd. Flow (perm)	3469	4433	1571	173	4269	1534	3368	3416	0	726	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187			93		26				242
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	410	1513	288	265	1115	49	295	365	96	113	336	456
Shared Lane Traffic (%)												
Lane Group Flow (vph)	410	1513	288	265	1115	49	295	461	0	113	336	456
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	20.0	51.1	51.1	19.0	50.1	50.1	16.0	54.9		15.0	53.9	53.9
Total Split (%)	14.3%	36.5%	36.5%	13.6%	35.8%	35.8%	11.4%	39.2%		10.7%	38.5%	38.5%
Maximum Green (s)	16.0	44.4	44.4	15.0	43.4	43.4	12.0	48.0		11.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	18.0	44.8	44.8	61.8	44.0	44.0	12.1	28.6		39.0	26.3	26.3
Actuated g/C Ratio	0.15	0.37	0.37	0.51	0.37	0.37	0.10	0.24		0.32	0.22	0.22
v/c Ratio	0.79	0.92	0.41	0.90	0.71	0.08	0.87	0.55		0.35	0.44	0.86
Control Delay	62.4	46.6	12.9	64.5	37.4	0.5	79.4	39.7		27.1	41.3	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	62.4	46.6	12.9	64.5	37.4	0.5	79.4	39.7		27.1	41.3	36.4
LOS	E	D	B	E	D	A	E	D		C	D	D
Approach Delay		45.2			41.2			55.2			37.1	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 120.1			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 44.1		Intersection LOS: D	
Intersection Capacity Utilization 85.3%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West

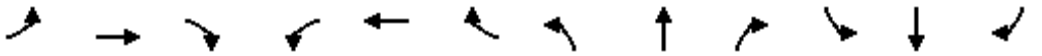




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	410	1513	288	265	1115	49	295	461	113	336	456
v/c Ratio	0.79	0.92	0.41	0.90	0.71	0.08	0.87	0.55	0.35	0.44	0.86
Control Delay	62.4	46.6	12.9	64.5	37.4	0.5	79.4	39.7	27.1	41.3	36.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.4	46.6	12.9	64.5	37.4	0.5	79.4	39.7	27.1	41.3	36.4
Queue Length 50th (m)	48.0	138.5	15.6	44.5	92.2	0.0	35.5	47.5	17.4	35.9	51.1
Queue Length 95th (m)	#85.6	#220.2	45.8	#115.8	137.5	0.7	#72.0	63.2	29.4	48.8	90.7
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	524	1652	702	294	1562	620	339	1392	338	1371	763
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.92	0.41	0.90	0.71	0.08	0.87	0.33	0.33	0.25	0.60

Intersection Summary

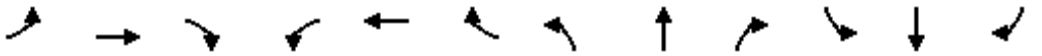
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Future Volume (vph)	394	1452	276	254	1070	47	283	350	92	108	323	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1573	1807	4269	1534	3372	3416		1753	3476	1564
Flt Permitted	0.95	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.39	1.00	1.00
Satd. Flow (perm)	3471	4433	1573	173	4269	1534	3372	3416		727	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	410	1512	288	265	1115	49	295	365	96	112	336	456
RTOR Reduction (vph)	0	0	117	0	0	31	0	20	0	0	0	189
Lane Group Flow (vph)	410	1513	171	265	1115	18	295	441	0	113	336	267
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	15.9	44.8	44.8	59.1	44.0	44.0	12.1	28.6		36.1	26.3	26.3
Effective Green, g (s)	17.9	44.8	44.8	59.1	44.0	44.0	12.1	28.6		36.1	26.3	26.3
Actuated g/C Ratio	0.15	0.37	0.37	0.49	0.37	0.37	0.10	0.24		0.30	0.22	0.22
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	518	1656	587	291	1566	562	340	814		302	762	343
v/s Ratio Prot	0.12	c0.34		c0.11	0.26		c0.09	0.13		0.03	0.10	
v/s Ratio Perm			0.11	0.33		0.01				0.08		c0.17
v/c Ratio	0.79	0.91	0.29	0.91	0.71	0.03	0.87	0.54		0.37	0.44	0.78
Uniform Delay, d1	49.2	35.7	26.4	34.1	32.5	24.3	53.1	39.9		31.4	40.4	44.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.1	8.1	0.3	30.6	1.6	0.0	20.1	0.7		0.8	0.4	10.6
Delay (s)	57.3	43.8	26.7	64.7	34.1	24.3	73.2	40.7		32.2	40.9	54.7
Level of Service	E	D	C	E	C	C	E	D		C	D	D
Approach Delay (s)		44.1			39.4			53.4			46.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	119.9	Sum of lost time (s)	21.6
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

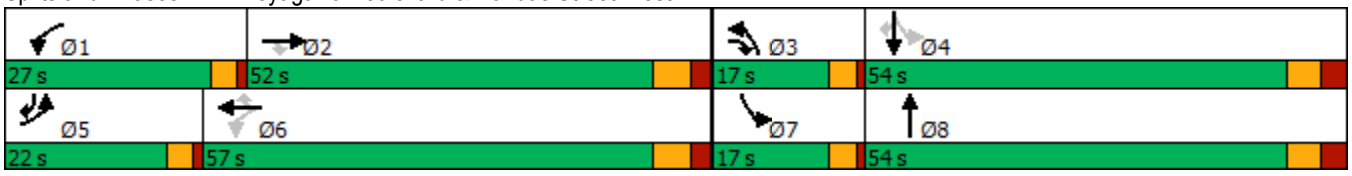


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Future Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1617	1825	4476	1541	3471	3476	0	1807	3579	1585
Flt Permitted	0.950			0.086			0.950			0.189		
Satd. Flow (perm)	3471	4433	1587	165	4476	1520	3465	3476	0	357	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			185			87		21				85
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	389	1148	269	324	1875	89	349	528	131	106	382	514
Shared Lane Traffic (%)												
Lane Group Flow (vph)	389	1148	269	324	1875	89	349	659	0	106	382	514
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	3	1	6	6	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	7.0
Minimum Split (s)	11.0	49.7	11.0	11.0	49.7	49.7	11.0	53.9		11.0	53.9	11.0
Total Split (s)	22.0	52.0	17.0	27.0	57.0	57.0	17.0	54.0		17.0	54.0	22.0
Total Split (%)	14.7%	34.7%	11.3%	18.0%	38.0%	38.0%	11.3%	36.0%		11.3%	36.0%	14.7%
Maximum Green (s)	18.0	45.3	13.0	23.0	50.3	50.3	13.0	47.1		13.0	47.1	18.0
Yellow Time (s)	3.0	4.2	3.0	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.0
All-Red Time (s)	1.0	2.5	1.0	1.0	2.5	2.5	1.0	3.2		1.0	3.2	1.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	-2.0	0.0	-2.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		36.0			36.0	36.0		40.0			40.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	19.4	45.4	61.2	74.6	52.6	50.6	15.1	29.9		41.3	27.6	47.9
Actuated g/C Ratio	0.15	0.35	0.47	0.57	0.40	0.39	0.12	0.23		0.32	0.21	0.37
v/c Ratio	0.76	0.74	0.32	0.85	1.04	0.14	0.87	0.81		0.46	0.50	0.82
Control Delay	64.3	42.1	8.0	55.3	70.3	6.8	79.5	54.5		34.0	47.1	39.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	64.3	42.1	8.0	55.3	70.3	6.8	79.5	54.5		34.0	47.1	39.1
LOS	E	D	A	E	E	A	E	D		C	D	D
Approach Delay		41.8			65.7			63.1			41.6	
Approach LOS		D			E			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 130.3			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 54.3		Intersection LOS: D	
Intersection Capacity Utilization 96.8%		ICU Level of Service F	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West



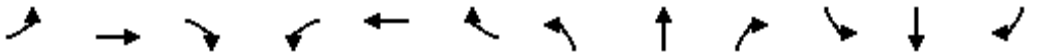


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	389	1148	269	324	1875	89	349	659	106	382	514
v/c Ratio	0.76	0.74	0.32	0.85	1.04	0.14	0.87	0.81	0.46	0.50	0.82
Control Delay	64.3	42.1	8.0	55.3	70.3	6.8	79.5	54.5	34.0	47.1	39.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	42.1	8.0	55.3	70.3	6.8	79.5	54.5	34.0	47.1	39.1
Queue Length 50th (m)	50.0	108.5	11.2	62.7	~219.0	0.3	46.3	83.0	18.3	46.0	95.0
Queue Length 95th (m)	#75.9	144.7	31.9	#127.2	#288.5	11.9	#81.4	106.1	30.9	61.1	136.6
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	535	1549	846	388	1806	643	401	1276	264	1300	639
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.74	0.32	0.84	1.04	0.14	0.87	0.52	0.40	0.29	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

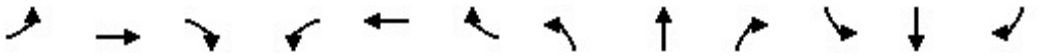
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Future Volume (vph)	373	1102	258	311	1800	85	335	507	126	102	367	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1595	1825	4476	1521	3471	3479		1805	3579	1571
Flt Permitted	0.95	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.19	1.00	1.00
Satd. Flow (perm)	3471	4433	1595	166	4476	1521	3471	3479		359	3579	1571
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	389	1148	269	324	1875	89	349	528	131	106	382	514
RTOR Reduction (vph)	0	0	102	0	0	53	0	16	0	0	0	56
Lane Group Flow (vph)	389	1148	167	324	1875	36	349	643	0	106	382	458
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	17.3	45.4	58.5	71.9	50.6	50.6	13.1	30.0		38.3	27.6	44.9
Effective Green, g (s)	19.3	45.4	58.5	71.9	52.6	50.6	15.1	30.0		38.3	27.6	44.9
Actuated g/C Ratio	0.15	0.35	0.45	0.55	0.40	0.39	0.12	0.23		0.29	0.21	0.34
Clearance Time (s)	4.0	6.7	4.0	4.0	6.7	6.7	4.0	6.9		4.0	6.9	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	514	1545	716	378	1808	591	402	801		224	758	541
v/s Ratio Prot	0.11	0.26	0.02	c0.15	c0.42		c0.10	c0.18		0.04	0.11	0.11
v/s Ratio Perm			0.08	0.33		0.02				0.10		0.18
v/c Ratio	0.76	0.74	0.23	0.86	1.04	0.06	0.87	0.80		0.47	0.50	0.85
Uniform Delay, d1	53.2	37.3	22.1	36.8	38.8	24.9	56.6	47.3		35.4	45.3	39.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.3	2.0	0.2	17.1	31.4	0.0	17.6	5.8		1.6	0.5	11.7
Delay (s)	59.5	39.2	22.2	53.9	70.2	25.0	74.2	53.1		37.0	45.8	51.2
Level of Service	E	D	C	D	E	C	E	D		D	D	D
Approach Delay (s)		41.1			66.2			60.4			47.6	
Approach LOS		D			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	130.2	Sum of lost time (s)	21.6
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

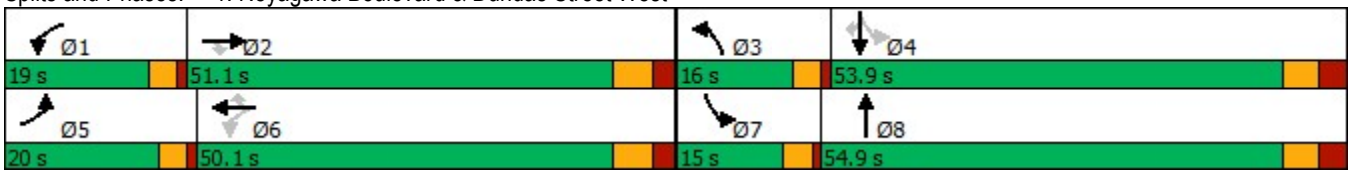


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Future Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98			0.99	1.00	1.00		1.00		0.99
Frt			0.850			0.850		0.970				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1601	1807	4269	1555	3372	3419	0	1755	3476	1585
Flt Permitted	0.950			0.092			0.950			0.359		
Satd. Flow (perm)	3469	4433	1571	175	4269	1534	3369	3419	0	661	3476	1564
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187			93		24				241
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		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	0.96
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Adj. Flow (vph)	473	1513	288	265	1131	73	304	384	96	200	424	459
Shared Lane Traffic (%)												
Lane Group Flow (vph)	473	1513	288	265	1131	73	304	480	0	200	424	459
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	2	1	6	6	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	11.0	49.7	49.7	11.0	49.7	49.7	11.0	53.9		11.0	53.9	53.9
Total Split (s)	20.0	51.1	51.1	19.0	50.1	50.1	16.0	54.9		15.0	53.9	53.9
Total Split (%)	14.3%	36.5%	36.5%	13.6%	35.8%	35.8%	11.4%	39.2%		10.7%	38.5%	38.5%
Maximum Green (s)	16.0	44.4	44.4	15.0	43.4	43.4	12.0	48.0		11.0	47.0	47.0
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.7
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5	2.5	1.0	3.2		1.0	3.2	3.2
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		36.0	36.0		36.0	36.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effct Green (s)	18.1	44.8	44.8	61.6	43.7	43.7	12.1	29.1		41.8	28.0	28.0
Actuated g/C Ratio	0.15	0.37	0.37	0.51	0.36	0.36	0.10	0.24		0.34	0.23	0.23
v/c Ratio	0.91	0.93	0.41	0.91	0.74	0.12	0.91	0.57		0.62	0.53	0.84
Control Delay	75.3	48.8	13.2	66.9	39.0	4.1	85.9	40.6		34.5	42.7	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	75.3	48.8	13.2	66.9	39.0	4.1	85.9	40.6		34.5	42.7	34.9
LOS	E	D	B	E	D	A	F	D		C	D	C
Approach Delay		49.8			42.3			58.2			37.8	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 121.7			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 46.7		Intersection LOS: D	
Intersection Capacity Utilization 90.3%		ICU Level of Service E	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	473	1513	288	265	1131	73	304	480	200	424	459
v/c Ratio	0.91	0.93	0.41	0.91	0.74	0.12	0.91	0.57	0.62	0.53	0.84
Control Delay	75.3	48.8	13.2	66.9	39.0	4.1	85.9	40.6	34.5	42.7	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.3	48.8	13.2	66.9	39.0	4.1	85.9	40.6	34.5	42.7	34.9
Queue Length 50th (m)	57.4	141.2	15.9	45.2	95.9	0.0	37.2	50.4	32.4	46.7	52.4
Queue Length 95th (m)	#106.9	#224.1	46.4	#117.1	142.3	7.4	#75.9	66.2	49.4	61.3	92.2
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	517	1630	695	291	1534	610	335	1373	327	1353	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.93	0.41	0.91	0.74	0.12	0.91	0.35	0.61	0.31	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Future Volume (vph)	454	1452	276	254	1086	70	292	369	92	192	407	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1572	1807	4269	1534	3372	3419		1754	3476	1564
Flt Permitted	0.95	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.36	1.00	1.00
Satd. Flow (perm)	3471	4433	1572	174	4269	1534	3372	3419		662	3476	1564
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	473	1512	288	265	1131	73	304	384	96	200	424	459
RTOR Reduction (vph)	0	0	118	0	0	47	0	18	0	0	0	185
Lane Group Flow (vph)	473	1513	170	265	1131	26	304	462	0	200	424	274
Confl. Peds. (#/hr)	2		7	7		2	2		6	6		2
Heavy Vehicles (%)	2%	4%	2%	1%	8%	5%	5%	4%	0%	4%	5%	3%
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	16.1	44.7	44.7	58.8	43.7	43.7	12.1	29.2		38.9	28.0	28.0
Effective Green, g (s)	18.1	44.7	44.7	58.8	43.7	43.7	12.1	29.2		38.9	28.0	28.0
Actuated g/C Ratio	0.15	0.37	0.37	0.48	0.36	0.36	0.10	0.24		0.32	0.23	0.23
Clearance Time (s)	4.0	6.7	6.7	4.0	6.7	6.7	4.0	6.9		4.0	6.9	6.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	517	1630	578	287	1535	551	335	821		309	801	360
v/s Ratio Prot	c0.14	c0.34		0.11	0.26		c0.09	0.14		0.06	0.12	
v/s Ratio Perm			0.11	0.33		0.02				0.15		c0.17
v/c Ratio	0.91	0.93	0.29	0.92	0.74	0.05	0.91	0.56		0.65	0.53	0.76
Uniform Delay, d1	50.9	36.9	27.2	34.9	33.9	25.3	54.1	40.5		32.0	41.0	43.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	20.8	9.6	0.3	33.4	1.9	0.0	26.9	0.9		4.6	0.6	8.9
Delay (s)	71.7	46.5	27.5	68.3	35.8	25.4	81.0	41.4		36.6	41.6	52.5
Level of Service	E	D	C	E	D	C	F	D		D	D	D
Approach Delay (s)		49.3			41.1			56.8			45.3	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	47.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	121.5	Sum of lost time (s)	21.6
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

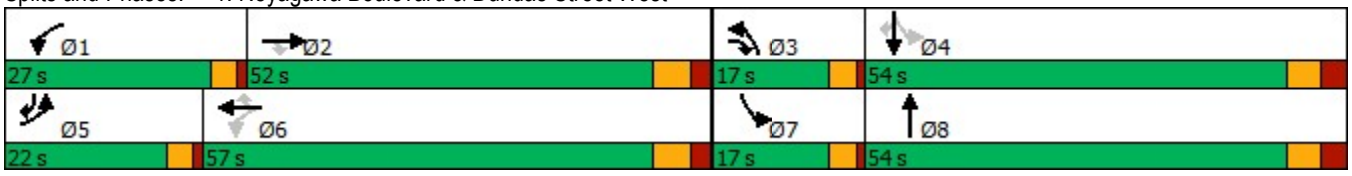
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Future Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		75.0	80.0		80.0	110.0		0.0	60.0		85.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.99	1.00	0.99		0.99		0.99
Frt			0.850			0.850		0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3471	4433	1617	1825	4476	1541	3471	3489	0	1807	3579	1585
Flt Permitted	0.950			0.080			0.950			0.152		
Satd. Flow (perm)	3471	4433	1587	154	4476	1520	3466	3489	0	287	3579	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			158			89		19				85
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		206.4			284.9			131.3			156.1	
Travel Time (s)		10.6			14.7			7.9			9.4	
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		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
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Adj. Flow (vph)	483	1148	269	324	1948	173	365	588	131	176	425	517
Shared Lane Traffic (%)												
Lane Group Flow (vph)	483	1148	269	324	1948	173	365	719	0	176	425	517
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)		7.4			7.4			7.4			7.4	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	6.1	30.5		6.1	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	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		0.0	0.0	0.0
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	6.1	1.8		6.1	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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		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		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		0.0	0.0	0.0
Detector 2 Position(m)		28.7			28.7			28.7			28.7	
Detector 2 Size(m)		1.8			1.8			1.8			1.8	
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	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Detector Phase	5	2	3	1	6	6	3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	20.0	7.0	7.0	20.0	20.0	7.0	10.0		7.0	10.0	7.0
Minimum Split (s)	11.0	49.7	11.0	11.0	49.7	49.7	11.0	53.9		11.0	53.9	11.0
Total Split (s)	22.0	52.0	17.0	27.0	57.0	57.0	17.0	54.0		17.0	54.0	22.0
Total Split (%)	14.7%	34.7%	11.3%	18.0%	38.0%	38.0%	11.3%	36.0%		11.3%	36.0%	14.7%
Maximum Green (s)	18.0	45.3	13.0	23.0	50.3	50.3	13.0	47.1		13.0	47.1	18.0
Yellow Time (s)	3.0	4.2	3.0	3.0	4.2	4.2	3.0	3.7		3.0	3.7	3.0
All-Red Time (s)	1.0	2.5	1.0	1.0	2.5	2.5	1.0	3.2		1.0	3.2	1.0
Lost Time Adjust (s)	-2.0	0.0	0.0	0.0	-2.0	0.0	-2.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		36.0			36.0	36.0		40.0			40.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	20.1	45.8	61.6	75.0	52.5	50.4	15.0	33.8		48.6	33.2	54.2
Actuated g/C Ratio	0.15	0.34	0.45	0.55	0.38	0.37	0.11	0.25		0.36	0.24	0.40
v/c Ratio	0.95	0.77	0.33	0.90	1.13	0.28	0.96	0.82		0.73	0.49	0.77
Control Delay	86.4	45.8	10.7	65.4	106.2	16.8	96.2	55.4		46.4	45.8	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	86.4	45.8	10.7	65.4	106.2	16.8	96.2	55.4		46.4	45.8	35.0
LOS	F	D	B	E	F	B	F	E		D	D	C
Approach Delay		51.2			94.4			69.1			40.9	
Approach LOS		D			F			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 136.4			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 68.5		Intersection LOS: E	
Intersection Capacity Utilization 105.0%		ICU Level of Service G	
Analysis Period (min) 15			
* User Entered Value			

Splits and Phases: 1: Neyagawa Boulevard & Dundas Street West



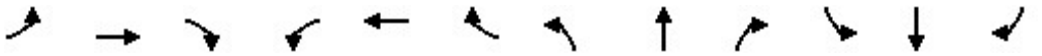


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	483	1148	269	324	1948	173	365	719	176	425	517
v/c Ratio	0.95	0.77	0.33	0.90	1.13	0.28	0.96	0.82	0.73	0.49	0.77
Control Delay	86.4	45.8	10.7	65.4	106.2	16.8	96.2	55.4	46.4	45.8	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	45.8	10.7	65.4	106.2	16.8	96.2	55.4	46.4	45.8	35.0
Queue Length 50th (m)	67.7	116.7	16.6	69.3	~256.0	15.2	51.4	94.8	31.7	51.9	95.9
Queue Length 95th (m)	#111.3	151.0	39.6	#136.3	#320.5	35.8	#90.3	117.0	#50.3	67.6	136.6
Internal Link Dist (m)		182.4			260.9			107.3		132.1	
Turn Bay Length (m)	125.0		75.0	80.0		80.0	110.0		60.0		85.0
Base Capacity (vph)	510	1489	805	367	1721	618	382	1220	248	1239	674
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.77	0.33	0.88	1.13	0.28	0.96	0.59	0.71	0.34	0.77

Intersection Summary

~ 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.



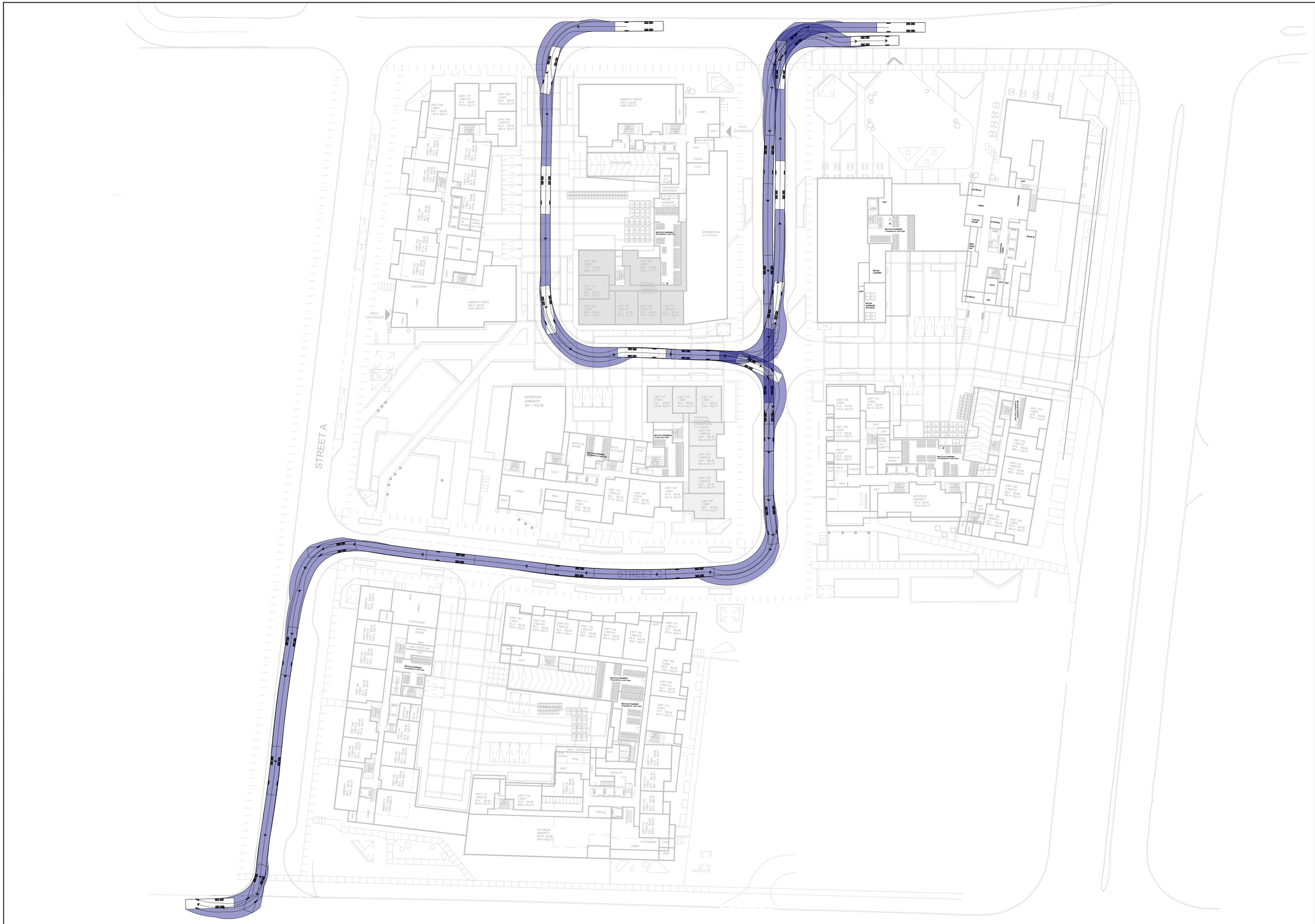
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Future Volume (vph)	464	1102	258	311	1870	166	350	564	126	169	408	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	6.7	4.0	4.0	4.7	6.7	2.0	6.9		4.0	6.9	4.0
Lane Util. Factor	0.97	*0.80	1.00	1.00	*0.80	1.00	0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3471	4433	1595	1825	4476	1521	3471	3489		1806	3579	1570
Flt Permitted	0.95	1.00	1.00	0.08	1.00	1.00	0.95	1.00		0.15	1.00	1.00
Satd. Flow (perm)	3471	4433	1595	154	4476	1521	3471	3489		289	3579	1570
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	483	1148	269	324	1948	173	365	588	131	176	425	517
RTOR Reduction (vph)	0	0	90	0	0	56	0	14	0	0	0	53
Lane Group Flow (vph)	483	1148	179	324	1948	117	365	705	0	176	425	464
Confl. Peds. (#/hr)	1		6	6		1	3		22	22		3
Heavy Vehicles (%)	2%	4%	1%	0%	3%	6%	2%	1%	2%	1%	2%	3%
Turn Type	Prot	NA	pm+ov	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	pm+ov
Protected Phases	5	2	3	1	6		3	8		7	4	5
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	18.1	45.8	58.8	72.5	50.4	50.4	13.0	33.8		45.8	33.3	51.4
Effective Green, g (s)	20.1	45.8	58.8	72.5	52.4	50.4	15.0	33.8		45.8	33.3	51.4
Actuated g/C Ratio	0.15	0.34	0.43	0.53	0.38	0.37	0.11	0.25		0.34	0.24	0.38
Clearance Time (s)	4.0	6.7	4.0	4.0	6.7	6.7	4.0	6.9		4.0	6.9	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	511	1488	687	359	1719	562	381	864		236	873	591
v/s Ratio Prot	c0.14	0.26	0.02	c0.15	c0.44		c0.11	c0.20		0.07	0.12	0.10
v/s Ratio Perm			0.09	0.33		0.08				0.18		0.19
v/c Ratio	0.95	0.77	0.26	0.90	1.13	0.21	0.96	0.82		0.75	0.49	0.79
Uniform Delay, d1	57.6	40.6	24.9	41.0	42.0	29.4	60.4	48.4		35.3	44.2	37.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.5	2.5	0.2	24.9	67.8	0.2	34.9	6.0		12.1	0.4	6.8
Delay (s)	84.1	43.2	25.1	65.9	109.8	29.6	95.2	54.3		47.3	44.7	44.4
Level of Service	F	D	C	E	F	C	F	D		D	D	D
Approach Delay (s)		51.0			98.3			68.1			45.0	
Approach LOS		D			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	70.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	136.4	Sum of lost time (s)	21.6
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Appendix G

AutoTURN Swept Path Analysis



GHD

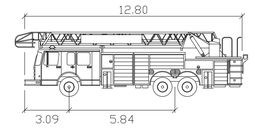
www.ghd.com

GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 **F** 1 905 712 0515

Conditions of Use

This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO



Aerial Fire

	meters
Width	: 2.54
Track	: 2.54
Lock to Lock Time	: 6.0
Steering Angle	: 37.0

No.	Issue	Checked	Approved	Date
2	Second Submission	W.M	W.M	3/17/26
1	First Submission	W.M	W.M	11/21/24

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

Client

NEATT (16 MILE CREEK) INC.

Project

3056 NEYAGAWA BOULEVARD

Date	Scale
November 21, 2024	NTS

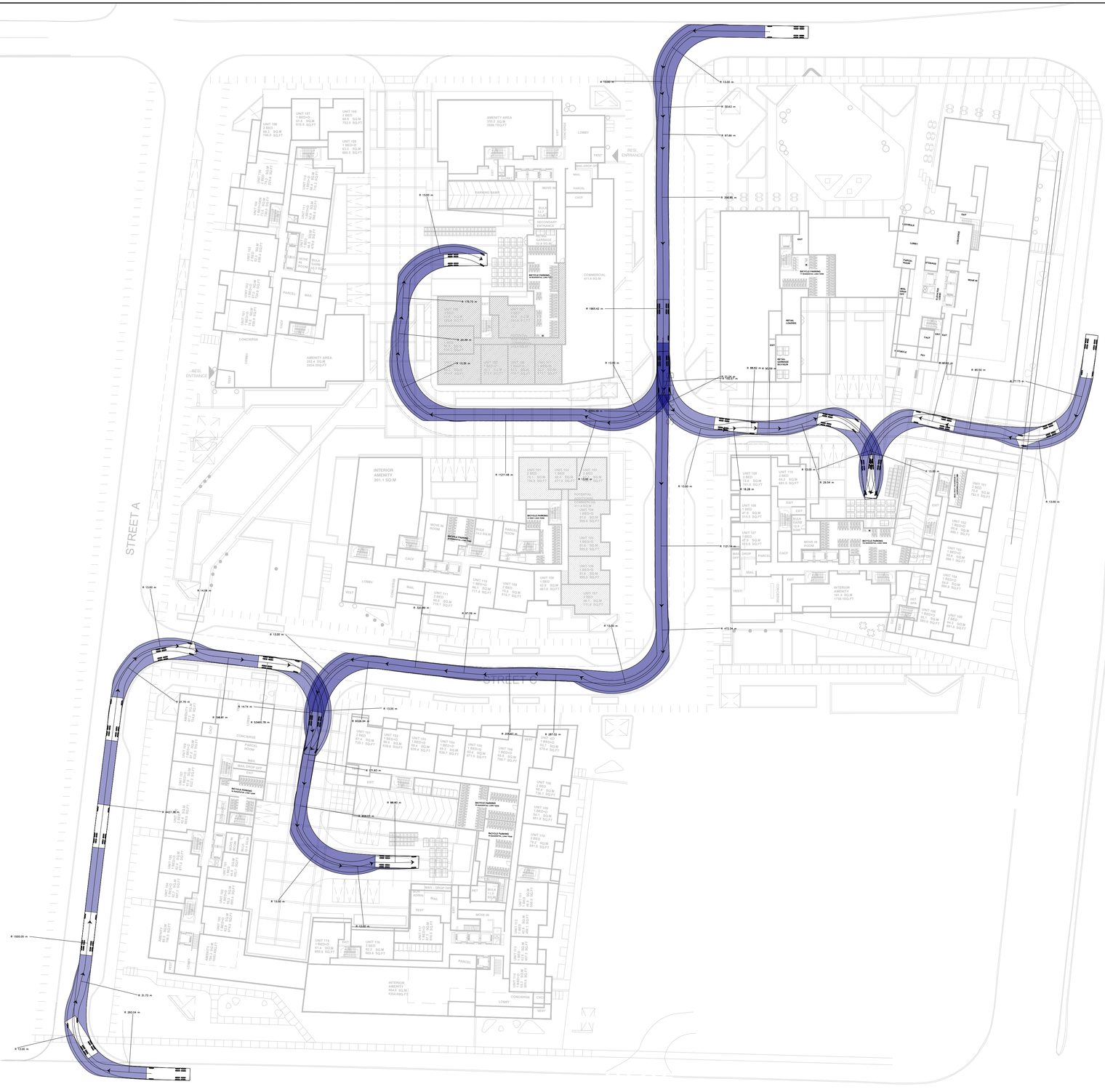
Project No.
12624194

Title

VEHICLE MANEUVERING DIAGRAM - FIRE TRUCK

Size
ANSI D

Sheet No.
AT-101


STREET A
STREET C
AMENITY AREA
332.2 SQ.M
3576 SQ.FT
LOBBY
CONCIERGE
RESI. ENTRANCE
VEST
MAIL
PARCEL
CACF
MOVE IN ROOM
BULK STORAGE
SECONDARY ENTRANCE
GARBAGE
29.9 SQ.M
COMMERCIAL
411.6 SQ.M
INTERIOR AMENITY
301.1 SQ.M
AMENITY AREA
352.4 SQ.M
3924.3SQ.FT
INTERIOR AMENITY
934.9 SQ.M
10064 SQ.FT
INTERIOR AMENITY
1631.8 SQ.M
17561 SQ.FT
RETAIL
RETAIL LOADING
RETAIL
1613.9 SQ.M
CONTROLS
LOBBY
PARCEL ROOM
STORAGE
MAIL DROP OFF
MOVE IN
ELEC. ROOM
CACF
PET
PET WASH
BICYCLE PARKING
BICYCLE PARKING
Bicycle Parking
Bicycle Parking
UNIT 101 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 102 1 BED+D 54.4 SQ.M 585.6 SQ.FT
UNIT 103 1 BED+D 54.4 SQ.M 585.6 SQ.FT
UNIT 104 1 BED 46.9 SQ.M 504.7 SQ.FT
UNIT 105 1 BED+D 54.4 SQ.M 585.6 SQ.FT
UNIT 106 1 BED+D 54.4 SQ.M 585.6 SQ.FT
UNIT 107 1 BED+D 54.4 SQ.M 585.6 SQ.FT
UNIT 108 1 BED 46.9 SQ.M 504.7 SQ.FT
UNIT 109 2 BED 72.8 SQ.M 783.6 SQ.FT
UNIT 110 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 111 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 112 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 113 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 114 1 BED 46.9 SQ.M 504.7 SQ.FT
UNIT 115 1 BED+D 61.4 SQ.M 660.6 SQ.FT
UNIT 116 1 BED 62.2 SQ.M 669.6 SQ.FT
UNIT 117 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 118 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 119 2 BED 72.8 SQ.M 783.6 SQ.FT
UNIT 120 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 121 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 122 1 BED 46.9 SQ.M 504.7 SQ.FT
UNIT 123 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 124 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 125 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 126 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 127 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 128 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 129 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 130 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 131 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 132 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 133 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 134 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 135 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 136 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 137 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 138 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 139 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 140 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 141 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 142 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 143 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 144 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 145 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 146 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 147 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 148 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 149 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 150 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 151 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 152 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 153 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 154 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 155 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 156 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 157 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 158 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 159 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 160 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 161 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 162 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 163 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 164 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 165 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 166 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 167 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 168 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 169 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 170 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 171 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 172 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 173 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 174 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 175 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 176 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 177 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 178 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 179 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 180 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 181 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 182 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 183 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 184 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 185 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 186 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 187 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 188 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 189 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 190 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 191 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 192 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 193 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 194 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 195 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 196 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 197 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 198 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 199 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 200 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 201 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 202 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 203 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 204 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 205 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 206 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 207 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 208 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 209 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 210 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 211 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 212 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 213 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 214 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 215 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 216 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 217 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 218 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 219 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 220 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 221 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 222 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 223 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 224 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 225 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 226 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 227 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 228 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 229 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 230 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 231 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 232 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 233 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 234 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 235 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 236 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 237 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 238 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 239 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 240 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 241 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 242 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 243 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 244 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 245 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 246 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 247 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 248 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 249 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 250 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 251 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 252 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 253 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 254 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 255 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 256 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 257 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 258 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 259 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 260 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 261 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 262 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 263 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 264 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 265 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 266 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 267 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 268 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 269 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 270 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 271 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 272 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 273 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 274 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 275 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 276 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 277 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 278 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 279 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 280 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 281 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 282 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 283 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 284 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 285 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 286 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 287 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 288 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 289 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 290 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 291 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 292 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 293 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 294 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 295 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 296 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 297 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 298 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 299 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 300 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 301 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 302 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 303 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 304 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 305 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 306 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 307 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 308 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 309 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 310 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 311 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 312 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 313 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 314 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 315 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 316 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 317 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 318 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 319 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 320 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 321 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 322 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 323 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 324 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 325 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 326 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 327 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 328 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 329 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 330 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 331 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 332 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 333 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 334 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 335 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 336 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 337 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 338 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 339 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 340 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 341 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 342 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 343 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 344 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 345 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 346 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 347 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 348 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 349 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 350 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 351 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 352 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 353 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 354 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 355 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 356 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 357 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 358 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 359 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 360 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 361 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 362 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 363 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 364 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 365 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 366 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 367 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 368 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 369 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 370 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 371 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 372 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 373 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 374 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 375 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 376 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 377 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 378 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 379 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 380 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 381 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 382 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 383 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 384 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 385 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 386 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 387 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 388 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 389 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 390 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 391 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 392 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 393 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 394 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 395 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 396 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 397 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 398 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 399 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 400 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 401 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 402 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 403 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 404 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 405 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 406 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 407 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 408 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 409 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 410 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 411 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 412 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 413 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 414 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 415 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 416 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 417 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 418 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 419 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 420 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 421 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 422 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 423 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 424 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 425 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 426 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 427 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 428 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 429 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 430 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 431 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 432 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 433 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 434 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 435 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 436 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 437 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 438 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 439 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 440 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 441 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 442 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 443 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 444 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 445 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 446 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 447 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 448 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 449 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 450 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 451 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 452 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 453 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 454 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 455 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 456 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 457 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 458 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 459 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 460 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 461 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 462 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 463 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 464 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 465 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 466 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 467 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 468 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 469 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 470 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 471 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 472 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 473 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 474 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 475 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 476 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 477 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 478 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 479 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 480 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 481 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 482 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 483 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 484 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 485 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 486 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 487 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 488 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 489 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 490 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 491 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 492 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 493 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 494 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 495 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 496 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 497 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 498 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 499 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 500 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 501 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 502 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 503 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 504 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 505 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 506 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 507 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 508 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 509 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 510 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 511 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 512 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 513 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 514 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 515 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 516 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 517 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 518 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 519 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 520 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 521 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 522 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 523 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 524 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 525 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 526 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 527 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 528 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 529 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 530 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 531 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 532 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 533 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 534 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 535 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 536 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 537 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 538 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 539 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 540 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 541 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 542 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 543 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 544 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 545 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 546 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 547 2 BED 71.4 SQ.M 768.5 SQ.FT
UNIT 548 1 BED+D 54.1 SQ.M 582.3 SQ.FT
UNIT 549 1 BED+D 54.1 SQ.M 582.3 SQ.FT



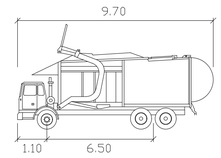
GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 **F** 1 905 712 0515

www.ghd.com

Conditions of Use

This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO



Halton-Front-End
meters

Width	: 2.70
Track	: 2.70
Lock to Lock Time	6.0
Steering Angle	: 30.0

No.	Issue	Checked	Approved	Date
2	Second Submission	W.M	W.M	3/17/26
1	First Submission	W.M	W.M	11/21/24

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

Client
NEATT (16 MILE CREEK) INC.

Project
3056 NEYAGAWA BOULEVARD

Date November 21, 2024

Scale NTS

Project No. 12624194

Title
VEHICLE MANEUVERING DIAGRAM - WASTE COLLECTION (OUTBOUND)

Size ANSI D

Sheet No. AT-103



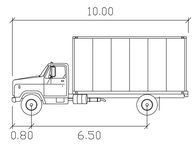
GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 **F** 1 905 712 0515

www.ghd.com

Conditions of Use

This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO



MSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	6.0
Steering Angle	: 40.2

No.	Issue	Checked	Approved	Date
2	Second Submission	W.M	W.M	3/17/26
1	First Submission	W.M	W.M	11/21/24

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

Client

NEATT (16 MILE CREEK) INC.

Project

3056 NEYAGAWA BOULEVARD

Date: November 21, 2024	Scale: NTS

Project No. 12624194

Title

VEHICLE MANEUVERING DIAGRAM - MSU TRUCK (INBOUND)

Size: ANSI D

Sheet No. AT-104



GHD

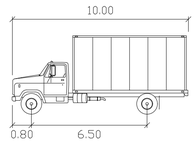
www.ghd.com

GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 **F** 1 905 712 0515

Conditions of Use

This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO



MSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	6.0
Steering Angle	: 40.2

No.	Issue	Checked	Approved	Date
2	Second Submission	W.M	W.M	3/17/26
1	First Submission	W.M	W.M	11/21/24

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

Client

NEATT (16 MILE CREEK) INC.

Project

3056 NEYAGAWA BOULEVARD

Date	Scale
November 21, 2024	NTS

Project No.
12624194

Title

VEHICLE MANEUVERING DIAGRAM - MSU TRUCK (OUTBOUND)

Size
ANSI D

Sheet No.
AT-105



GHD

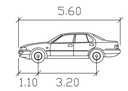
www.ghd.com

GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 **F** 1 905 712 0515

Conditions of Use

This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO



P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	6.0
Steering Angle	: 35.9

No.	Issue	Checked	Approved	Date
2	Second Submission	W.M	W.M	3/17/26
1	First Submission	W.M	W.M	11/21/24

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

Client

NEATT (16 MILE CREEK) INC.

Project

3056 NEYAGAWA BOULEVARD

Date	Scale
November 21, 2024	NTS

Project No.
12624194

Title

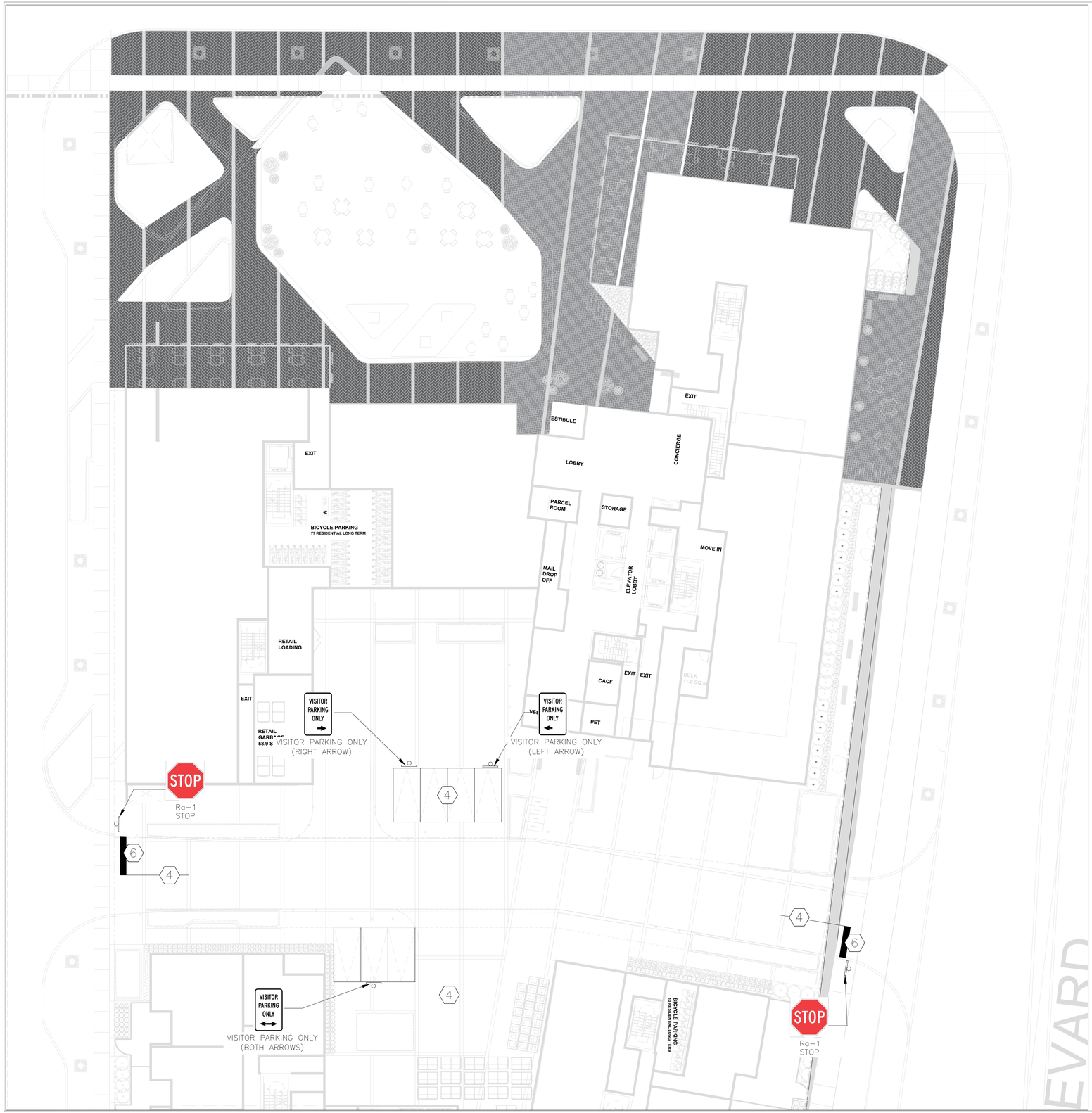
VEHICLE MANEUVERING DIAGRAM - PASSENGER VEHICLE

Size
ANSI D

Sheet No.
AT-106

Appendix H

Pavement Marking and Signage Plan



LEGEND

SIGNS

PAVEMENT MARKING LEGEND

IDENTIFICATION	TYPE	COLOUR	WIDTH (cm)
1	SOLID	WHITE	10
2	1-1-1 BROKEN	YELLOW	10
3	3-3-3 BROKEN	YELLOW	10
4	SOLID	YELLOW	10
5	3-6-3 BROKEN	YELLOW	10
6	SOLID	WHITE	60
20	SYMBOLS	WHITE	

PAVEMENT MARKING LEGEND TABLE NOTES

1. **3-3-3, 3-6-3, 3-9-3, DENOTES PAVEMENT MARKING SPACING (I.E., 3m LINE, 3m GAP, 3m LINE)**
2. **USE ⓧ TO DENOTE PAVEMENT MARKING**

TRAFFIC SIGN SCHEDULE

SIGN NUMBER	SIGN NAME	QUANTITY	COMMENTS
Ra-1	STOP	2	
CUSTOM	VISITOR PARKING ONLY	1	BOTH ARROWS
CUSTOM	VISITOR PARKING ONLY	1	LEFT ARROW
CUSTOM	VISITOR PARKING ONLY	1	RIGHT ARROW
TOTAL		5	

GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 F 1 905 712 0515
www.ghd.com

Conditions of Use
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO

No.	Issue	Checked	Approved	Date
2	ISSUED FOR SECOND SUBMISSION	W.M	W.M	03/17/26
1	ISSUED FOR FIRST SUBMISSION	W.M	W.M	11/29/24

Author R.A | Designer R.A
Drafting Check W.M | Design Check W.M
Project Manager W.M | Project Director W.M

Client
NEATT (16 MILE CREEK) INC.

Project
3056 NEYAGAWA BOULEVARD

Date November 29, 2024 | Scale NTS

Project No. 12624194

Title
PAVEMENT MARKING AND SIGNAGE PLAN - BLOCK 1

Size ANSI D
Status Code
Sheet No. PMP-101
Sheet of

Plot Date: 3/17/26 Plotted By: Raf Andrenacci Path and Filename: N:\CA\Mississauga\Projects\Legacy\SemasTransTech\Projects\2024\3056 Neyagawa\Drawings\PMP\3056 Neyagawa Boulevard PMP_March2026.dwg



LEGEND

SIGNS

PAVEMENT MARKING LEGEND

IDENTIFICATION	TYPE	COLOUR	WIDTH (cm)
1	SOLID	WHITE	10
2	1-1-1 BROKEN	YELLOW	10
3	3-3-3 BROKEN	YELLOW	10
4	SOLID	YELLOW	10
5	3-6-3 BROKEN	YELLOW	10
6	SOLID	WHITE	60
20	SYMBOLS	WHITE	

PAVEMENT MARKING LEGEND TABLE NOTES

1. 3-3-3, 3-6-3, 3-9-3, DENOTES PAVEMENT MARKING SPACING (I.E., 3m LINE, 3m GAP, 3m LINE)
2. USE (X) TO DENOTE PAVEMENT MARKING

TRAFFIC SIGN SCHEDULE

SIGN NUMBER	SIGN NAME	QUANTITY	COMMENTS
Ra-1	STOP	2	
CUSTOM	VISITOR PARKING ONLY	3	BOTH ARROWS
CUSTOM	VISITOR PARKING ONLY	1	LEFT ARROW
CUSTOM	VISITOR PARKING ONLY	1	RIGHT ARROW
	TOTAL	7	

GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 F 1 905 712 0515
www.ghd.com

Conditions of Use
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO

No.	Issue	Checked	Approved	Date
2	ISSUED FOR SECOND SUBMISSION	W.M	W.M	03/17/26
1	ISSUED FOR FIRST SUBMISSION	W.M	W.M	11/29/24

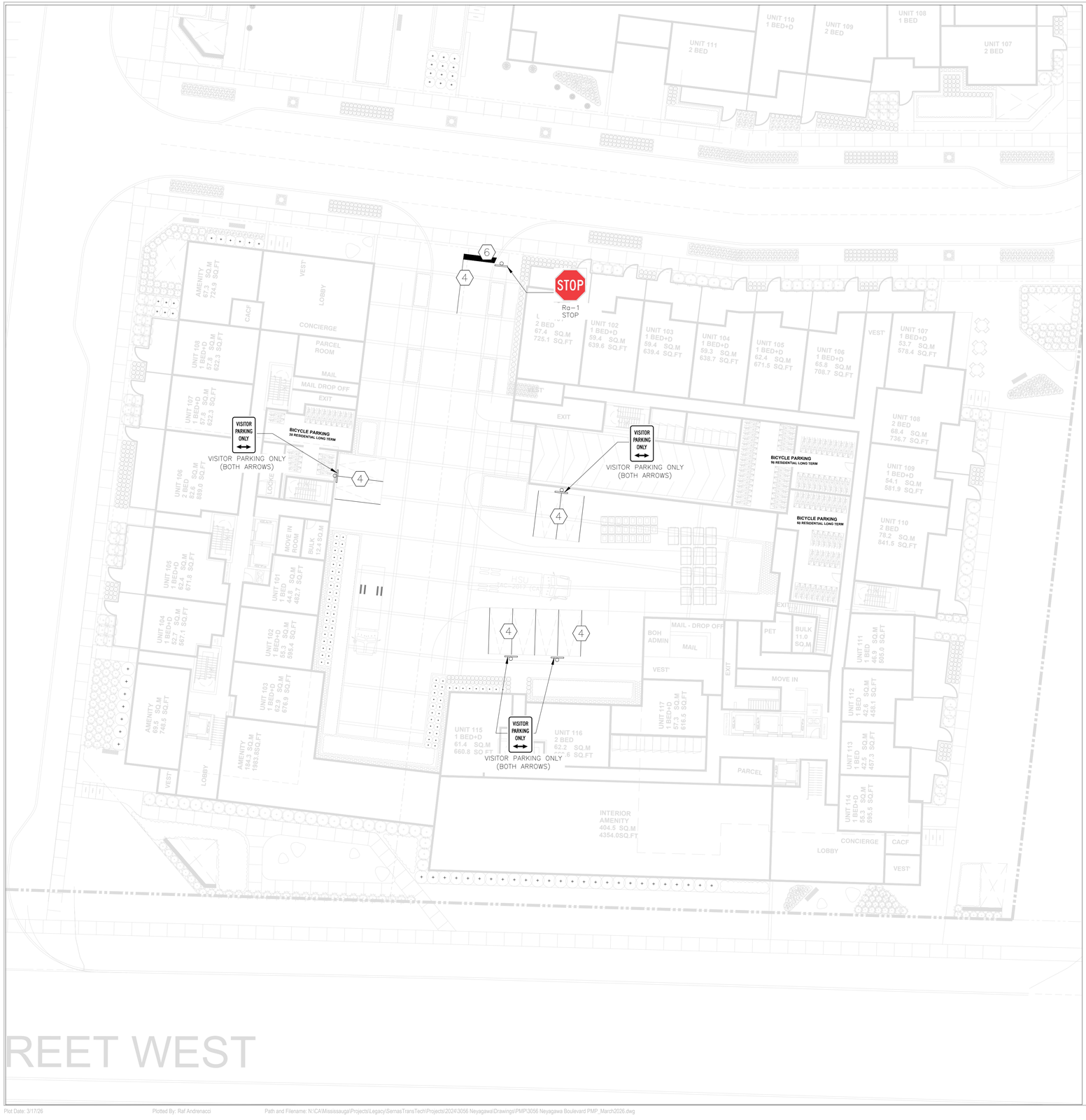
Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

Client
NEATT (16 MILE CREEK) INC.

Project
3056 NEYAGAWA BOULEVARD

Date	November 29, 2024
Scale	NTS
Project No.	12624194
Size	ANSI D
Status Code	
Sheet No.	PMP-102
Sheet	of

Title
PAVEMENT MARKING AND SIGNAGE PLAN - BLOCK 2



LEGEND

SIGNS

PAVEMENT MARKING LEGEND

IDENTIFICATION	TYPE	COLOUR	WIDTH (cm)
1	SOLID	WHITE	10
2	1-1-1 BROKEN	YELLOW	10
3	3-3-3 BROKEN	YELLOW	10
4	SOLID	YELLOW	10
5	3-6-3 BROKEN	YELLOW	10
6	SOLID	WHITE	60
20	SYMBOLS	WHITE	

PAVEMENT MARKING LEGEND TABLE NOTES

1. **3-3-3, 3-6-3, 3-9-3, DENOTES PAVEMENT MARKING SPACING (I.E., 3m LINE, 3m GAP, 3m LINE)**
2. **USE (X) TO DENOTE PAVEMENT MARKING**

TRAFFIC SIGN SCHEDULE

SIGN NUMBER	SIGN NAME	QUANTITY	COMMENTS
Ra-1	STOP	1	
CUSTOM	VISITOR PARKING ONLY	4	BOTH ARROWS
CUSTOM	VISITOR PARKING ONLY	0	LEFT ARROW
CUSTOM	VISITOR PARKING ONLY	0	RIGHT ARROW
	TOTAL	5	

GHD
www.ghd.com
GHD Ltd.
100 Milverton Drive, Suite 404
Mississauga, Ontario L5R 4H1 Canada
T 1 905 712 0510 F 1 905 712 0515

Conditions of Use
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD. This document may only be used by GHD's client (and any other person who GHD has agreed can use this document) for the purpose for which it was prepared and must not be used by any other person or for any other purpose.

LICENSED PROFESSIONAL ENGINEER
Mar. 17, 2026
W.C. MARIA
PROVINCE OF ONTARIO

No.	Issue	Checked	Approved	Date
2	ISSUED FOR SECOND SUBMISSION	W.M	W.M	03/17/26
1	ISSUED FOR FIRST SUBMISSION	W.M	W.M	11/29/24

Author R.A | Designer R.A
Drafting Check W.M | Design Check W.M
Project Manager W.M | Project Director W.M

Client
NEATT (16 MILE CREEK) INC.

Project
3056 NEYAGAWA BOULEVARD

Date November 29, 2024 | Scale NTS

Project No. 12624194

Title
PAVEMENT MARKING AND SIGNAGE PLAN - BLOCK 3

Size ANSI D
Status Code
Sheet No. PMP-103
Sheet of


GHD