Appendix I-9

Transportation Detailed Impact Assessment Report

Final Report

Transportation Detailed Impact Assessment

June 22, 2026

Walker Environmental Group – South Landfill Phase 2

TYLin Project #: 100482

walker | TYLin

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1 Introduction

This report documents the Transportation Impact Assessment of the Preferred Method for the Environmental Assessment (EA) to develop the next phase of the existing South Landfill (i.e., South Landfill Phase 2) located at the Walker Resource Management Campus (Campus). The proposed South Landfill Phase 2 will add approximately 19.8 million cubic metres (m^3) of landfill capacity.

In the preceding Alternative Methods phase of the EA, net effects analyses as well as a comparative evaluation of three Alternative Landfill Configuration Options and two Leachate Management Options were carried out to identify a Preferred Landfill Footprint and a Preferred Leachate Management Option. The three Alternative Landfill Configuration Options and two Leachate Management Options presented in the Alternative Methods phase were developed to a conceptual level of design and documented in a Conceptual Design Report (CDR). The potential environmental effects, preliminary impact management measures to address the potential adverse environmental effects, and the remaining net effects following the application of the impact management measures were identified for all three Alternative Landfill Configuration Options and both Leachate Management Options. The Preferred Landfill Configuration Option was determined to be Option A (Same Height and Slopes as Current South Landfill Phase 1) and the Preferred Leachate Management Option was determined to be Option A (Continued and Expanded Use of the Municipal Wastewater Treatment System), hereafter collectively referred to as the Preferred Method.

At the detailed impact assessment phase, additional details are developed for the Preferred Method from a design and operations perspective, as documented in a Facilities Characteristics Report (FCR), so that potential environmental effects, preliminary impact management and compensation measures, and resultant net effects described at the Alternative Methods stage can be reviewed and more accurately defined, as required, along with enhancement opportunities and approval requirements. Specifically, the following can be accomplished:

- Potential environmental effects can be identified with more certainty.
- More site-specific impact management measures can be developed for application.
- Additional mitigation and impact management measures can be identified, as required.
- Net environmental effects can be identified with more certainty.
- Appropriate monitoring requirements can be clearly defined.
- Specific approval/permitting requirements for the proposed undertaking can be identified.

Climate change mitigation and adaptation measures are also reviewed as part of the detailed site design established for the Preferred Method. In addition, during the impact assessment stage of the South Landfill Phase 2 EA, Walker has committed to completing an assessment of the cumulative effects of the proposed undertaking and other non-Walker projects and activities that are existing, planned/approved or reasonably foreseeable within the Study Area.

The discipline-specific work plans developed during the Terms of Reference (ToR) outlined how impacts associated with the Preferred Method would be assessed. The results of these assessments are documented in 13 stand-alone Detailed Impact Assessment Reports:

- Geology and Hydrogeology
- Surface Water Resources
- Noise and Vibration
- Air Quality
- Terrestrial and Aquatic Environment
- Land Use
- Agriculture
- Transportation
- Social Environment
- Economic Environment
- Built Heritage and Cultural Heritage Landscapes
- Archaeology
- Visual

1.1 Description of the Preferred Landfill Configuration Option

Landfill Configuration Option A was originally selected as preferred due to its long-term benefits, including the largest waste capacity, longest operational lifespan, and associated economic and employment advantages. Following its selection, the design of Landfill Configuration Option A was refined in response to feedback received during consultation to reduce its visual impact and improve compatibility with a future agricultural end use. Furthermore, the Limit of Fill boundaries were adjusted to avoid natural features and to accommodate necessary infrastructure within the buffer. These refinements included a reduction in peak elevation to 211 metres above mean sea level (mAMSL) at the top of waste (TOW; 211.75 mAMSL at the top of cap), and adjustments to slope gradients, now designed to a maximum steepness of 3:1 (horizontal:vertical) for below-ground slopes and between 16:1 and 3.5:1 for above-ground slopes, improving the area compatible with an agricultural end use. These changes bring Option A closer in form to the Options B and C while preserving its advantage of a higher overall waste capacity. The refined Option A design would provide approximately 19.8 million m^3 of expanded landfill capacity and include 44 hectares (ha) of land compatible with an agricultural end use. From the Transportation perspective, these adjustments do not impact any assessment findings.

1.2 Description of the Leachate Management Option

Leachate Management Option A builds upon the pre-existing leachate management system and approach while including the necessary expansion of the system capacity, as South Landfill Phase 2 is expected to generate approximately 131,000 m^3 of additional leachate per year at the time of closure (2050) and approximately 147,000 m^3 of additional leachate per year in 2070 when considering climate change. The expansion of the leachate management system entails a leachate sump, including a pump station equipped with the needed metering equipment and controls for monitoring and contingency purposes, alongside a forcemain to transport the leachate from the pump station to the lagoon area, where two new lagoons will be added to the two existing lagoons for pretreatment.

Once pretreated at the on-site lagoons, leachate will be conveyed via an existing force/gravity main to the Niagara-on-the-Lake sanitary sewer system for final treatment at the Region of Niagara's Port Weller Wastewater Treatment Plant. The need to upgrade the private sewer that connects to the Niagara-on-the-Lake sanitary sewer system has been identified and will be considered in the assessment.

1.3 Facility Characteristic Report for the Preferred Method

The Facility Characteristics Report (FCR) presents preliminary design and operations information for the Preferred Method and provides information on all main aspects of landfill design and operations including:

- Site layout design, including existing and proposed site characteristics;
- stormwater management;
- leachate management;
- landfill gas management; and,
- landfill development sequence and daily operations.

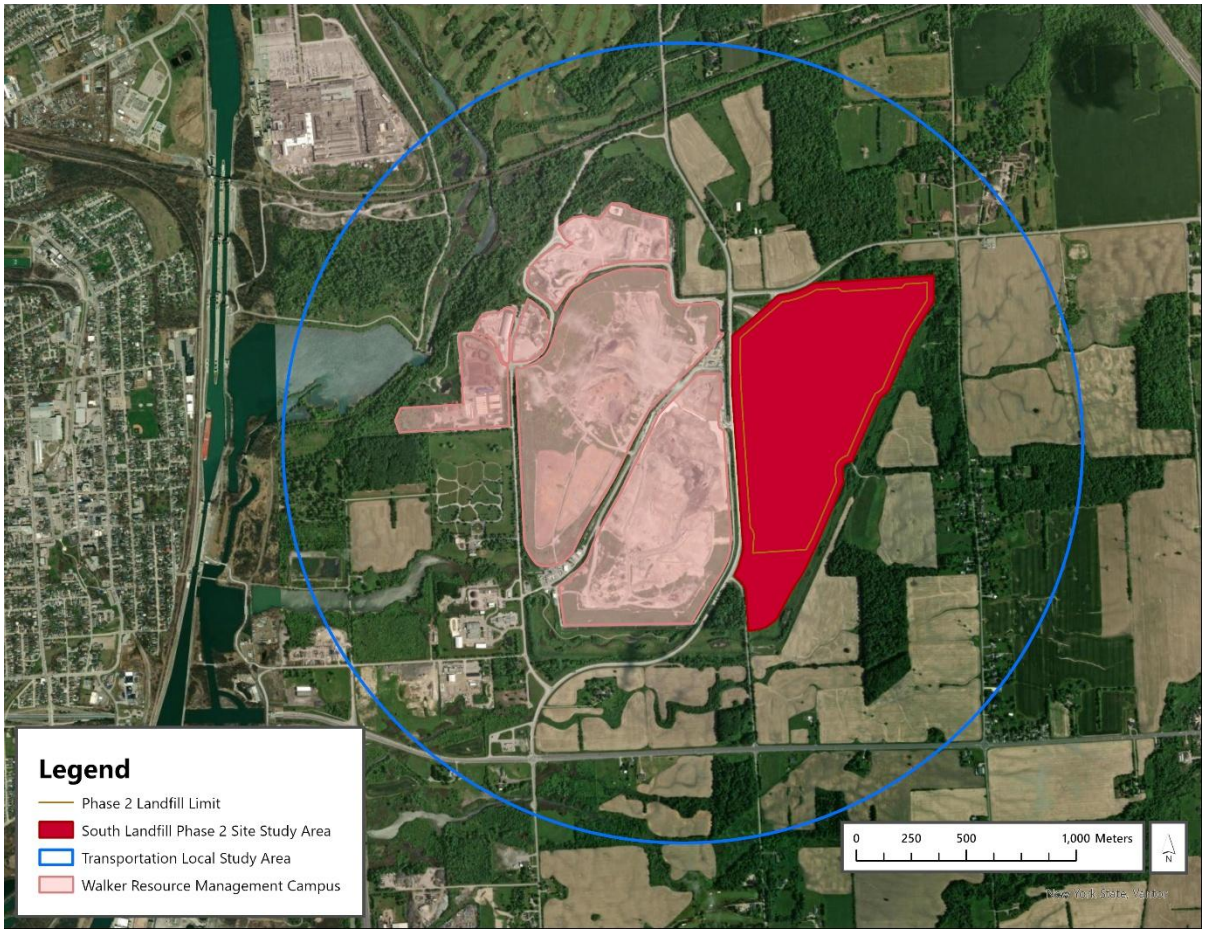
The FCR also provides estimates of parameters relevant to the detailed impact assessment, including estimates of leachate generation, landfill liner performance, landfill gas generation, and traffic levels associated with waste and construction materials haulage.

2 Study Area

From a Transportation perspective, the characterization of impacts within the following study areas are appropriate to this EA:

- **Site Study Area (SSA):** The SSA is consistent across all technical disciplines and encompasses a total of 81.30 ha of land owned and operated by Walker. The SSA includes the current quarry extraction limit, and encompasses the proposed limit of fill, the buffer area, and aligns with the proposed Waste Disposal Site Limit Boundary. While the SSA captures the core area of the proposed landfill development, certain ancillary features related to the landfill are proposed to be located outside the SSA. These features will be addressed within the broader Local Study Area.
- **Transportation Local Study Area (LSA):** The transportation LSA, as illustrated in **Figure 2-1** encompasses Walker's Campus and includes the area proposed for the South Landfill Phase 2. It is bordered by the City of Thorold to the west, Niagara-on-the-Lake to the north, and St. Catharines to the northwest, with surrounding land uses primarily industrial and agricultural, interspersed with rural residential and institutional properties. The terrain is generally flat to gently rolling, featuring open agricultural fields, hedgerows, fence lines, and mature deciduous woodlots, with internal haul roads and limited non-public access points connecting the quarry and landfill operations. The transportation-focused study area includes the adjacent regional and municipal road network, key intersections, and access roads that support landfill and quarry traffic.

Figure 2-1 Transportation Local Study Area



3 Methodology

3.1 Assessment Approach and Confirmation of Effects

The assessment of impacts associated with the Preferred Method was undertaken through a series of steps that were based, in part, on a number of previously prepared reports (Transportation Existing Conditions Report, Transportation Comparative Evaluation Technical Memorandum). The net effects associated with the three Alternative Landfill Configuration Options and two Alternative Leachate Management Options identified during the Alternative Methods phase of the EA were based on conceptual designs. These effects were reviewed within the context of the preliminary design plans developed for the Preferred Method, as identified in the FCR, to determine the type and extent of any additional investigations required to ensure a comprehensive assessment of net effects. Additional investigations were then carried out, where necessary, in order to augment the previous work undertaken. Feedback previously received from the EA consultation process was incorporated into the assessment approach, where appropriate. Specifically, additional future horizon model years were investigated to synthesize a more detailed summary of traffic impacts of the Preferred Method.

With these additional investigations in mind, the potential impacts on the Transportation environment of the Preferred Method were documented.

With a more detailed understanding of the potential impact from the preliminary landfill and leachate treatment designs on the Transportation environment, the previously identified potential effects and recommended mitigation or compensation measures associated with the Preferred Method (documented in the Transportation Comparative Evaluation Technical Memorandum) were reviewed to ensure their accuracy. Based on this review, the potential effects, mitigation or compensation measures, and net effects associated with the Preferred Method were confirmed and documented. In addition to identifying mitigation or compensation measures, potential enhancement opportunities associated with the preliminary design for the Preferred Method were also identified, where possible.

Following this confirmatory exercise, the requirement for monitoring of net effects was identified where appropriate. Finally, any Transportation approvals required as part of the implementation of the Preferred Method were identified.

3.2 Additional Investigations

Upon completion of the preliminary design for the Preferred Method as documented in the FCR, the environmental characteristics of the Study Area were reviewed to verify the accuracy of the assessment of net effects from the Preferred Method. From this review, it was determined that no additional investigations were needed.

4 Description of the Environment Potentially Affected

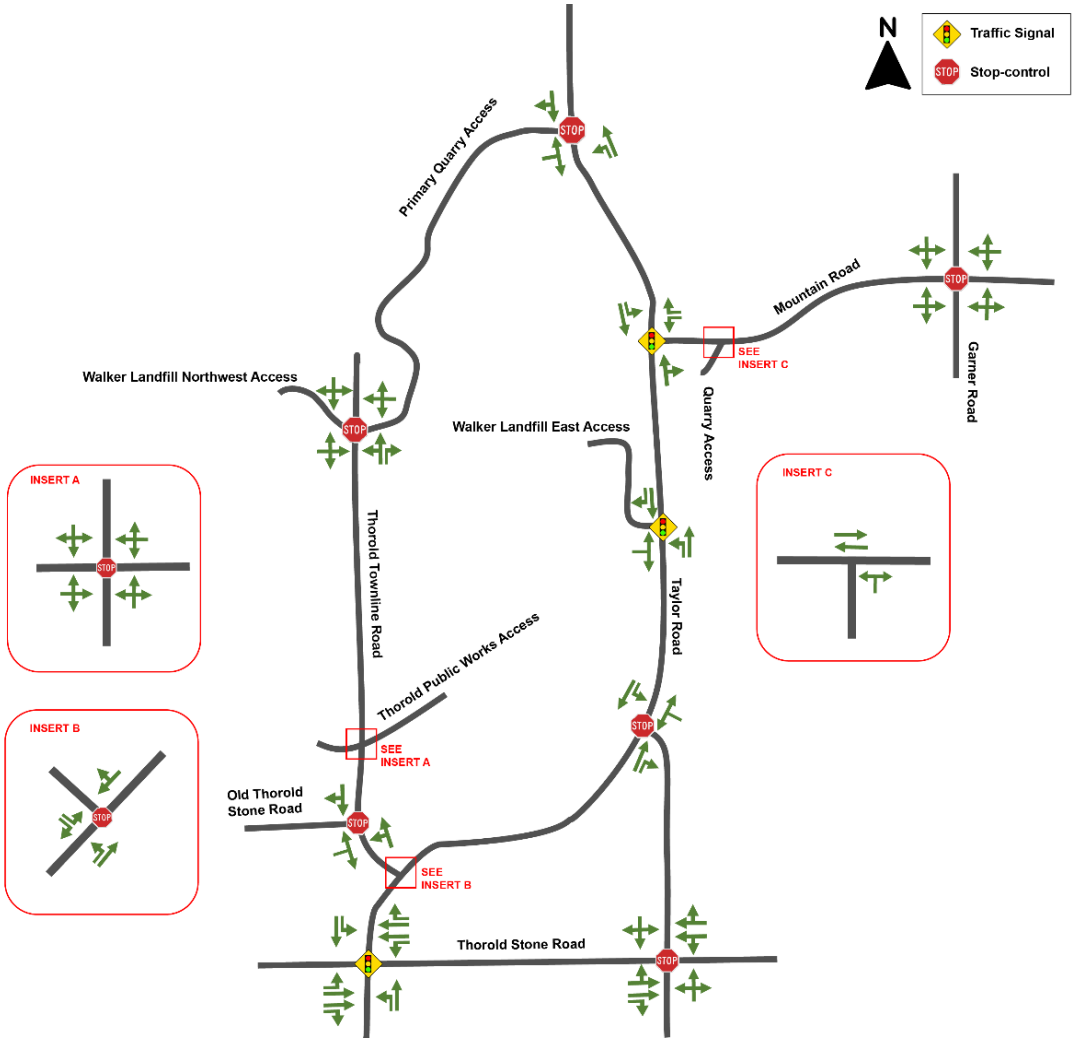
In this section, a description of the transportation environment is presented. The information is extracted from the Transportation Existing Conditions Report, and a more detailed description and list of reference sources can be found in that report.

4.1 Existing Conditions

The study area's road network is composed of several arterial corridors under the jurisdictions of Niagara Region, the City of Thorold, and the City of Niagara Falls. Key east-west routes include Thorold Stone Road, a four-lane arterial with an 80 km/h speed limit, and Mountain Road, a two-lane arterial posted at 70 km/h. Major north-south connections include Taylor Road, also a two-lane arterial with a 70 km/h speed limit, along with Thorold Townline Road, which transitions from City to Regional jurisdiction and carries a 50 km/h limit. Beechwood Road and Garner Road, both two-lane arterials in Niagara Falls, provide additional connectivity with posted speeds generally at 80 km/h, except for a reduced section on Garner Road.

Access to the Walker Campus is provided through four existing connections that support landfill and quarry operations. The primary landfill access (East Access) and the North Access are both located along Taylor Road, while the Landfill Northwest Access intersects with Thorold Townline Road near Walker's head office. A maintenance-only Quarry Access is located off Mountain Road. Internal circulation consists of a paved two-lane road and unpaved pathways linking different operational areas, with a one-lane underpass beneath Taylor Road enabling vehicle movement between the Southeast Quarry and the broader Campus. The existing roadways within the study area boundary are illustrated in **Figure 4-1** with their lane configurations.

Figure 4-1 Existing Road Network



The previously completed existing conditions report concluded that most study intersections operate efficiently, with traffic movements primarily functioning at a level-of-service (LOS) A-D. Along Thorold Townline Road, from Thorold Stone Road to the locations of Walker Industries Corporate Headquarters, all intersection movements are operating well at LOS A-C with minimal vehicular delays. Similarly, intersections along Taylor Road are also functioning with acceptable traffic operations.

Across the road network, the only critical operations are observed at the Thorold Stone Road & Beechwood Road intersection where the NBLTR and SBLTR movements experience high vehicular delays and are functioning at LOS E-F. While these movements are deemed critical under Niagara Region's Transportation Impact Assessment Guidelines, only a small number of vehicles make these movements during peak hours. Elaborating, heavy vehicles accessing or departing the Walker Landfill/Quarry frequently travel along Taylor Road, Thorold Townline Road, and Mountain Road. Across the three roadways mentioned, a large degree of travel occurs along Taylor Road due to the existing dedicated haul route for landfill traffic coming from the west.

4.2 "FUTURE" EXISTING CONDITIONS (DO NOTHING OPTION)

It is understood that a 'Future Existing' condition (do nothing option) would reflect a scenario where the subject site is rehabilitated following the stoppage of quarry activities, but a landfill expansion is not advanced. From a transportation perspective, this would reflect a typical "Future Background" condition encompassing background corridor growth but no new site trips. In comparison to the Existing Conditions assessment, this would reflect nominal annual growth of traffic volumes on the boundary road network (1% and 2% corridor growth on Taylor Road and Thorold Stone Road, respectively), but with a substantial reduction of site trips compared to existing activities due to the elimination of both landfill and quarry-related trips on the road network once those existing activities cease operations. Accordingly, the study area road network will experience improved traffic operations due to the reduction of heavy vehicle volumes at key intersections. These operational improvements would be experienced primarily at intersections immediately adjacent to the subject site, with the effects diminished as traffic distributes through the surrounding road network. It is noted that, as detailed in **Section 5.1**, the Future Conditions analysis has determined that the subject site will generate fewer trips in the ultimate horizon than under existing conditions. Accordingly, the impact of the "Do Nothing Option" may be similar in scale to the Future Total Traffic Condition, as assessed in the following sections.

5 Transportation Net Effects

As described in **Section 1**, following the confirmation of the Preferred Landfill Configuration Option and the Preferred Leachate Management Option, these components, together with all other project elements that were consistent across the previously assessed alternative methods, collectively formed the "Preferred Method." The potential effects and associated mitigation or compensation measures identified were re-evaluated to confirm their validity in the context of the preliminary design. This review incorporated the refined engineering design details described in the FCR.

The traffic analysis conducted in support of the previously assessed Preferred Method was supplemented with an assessment of an additional intermediate horizon scenario for the model year 2034. This additional future horizon served as the point of reference to evaluate traffic impacts of the landfill filling operations at East Landfill (Cell 16). During this model horizon, the South Landfill Phase 1 is expected to conduct operations comparable to existing conditions while all quarry operations are expected to cease.

In addition, a localized traffic assessment was undertaken for the 2028 model year to assess potential impacts on the Taylor Road site accesses during construction of the internal site tunnel, which is expected to result in either a full or partial closure of Taylor Road. For the purposes of the localized assessment, and to assess a more conservative scenario, a **full closure** of Taylor Road atop the tunnel construction area has been modelled. Refer to **Section 5.2** of this report for the resultant traffic conditions caused by construction of the internal site tunnel.

The updated assessment of predicted potential effects, recommended impact management measures, and resulting net effects is provided below.

5.1 Traffic Assessment

5.1.1 Horizon Years

Within the Transportation Comparative Evaluation Memo, the Preferred Method was evaluated for three future scenarios:

- The expected year of full buildout for South Landfill Phase 2 (2031).
- Intermediate year where South Landfill Phase 1 and quarry operations cease (2034).
- Five-year post-buildout scenario (2036).

The number associated with each scenario (i.e., 1,2 or 3) corresponds to their chronological order. **Table 5-1** below which summarizes the operating condition of each.

Table 5-1 Horizon Context Summary Table

Horizon	Number	Year	Operating Conditions and Context
Expected Buildout – South Landfill Phase 2	1	2031	Represents an initial transitional phase. Phase 2 operations are gradually operationalized. Phase 1, the existing quarry, and Phase 2 are all active to varying degrees.
Intermediate-Horizon Future Scenario	2	2034	Represents the intermediate transitional phase where both the South Landfill Phase 1 and the existing quarry have ceased operations. The East Landfill operates at partial capacity, and South Landfill Phase 2 is fully operational.
Five-year Post Build-out Scenario	3	2036	Reflects the ultimate condition where operations at the existing South Landfill (Phase 1) have fully ceased, and the East Landfill and Phase 2 are operating at full capacity.

5.1.2 Study Intersections

Traffic analysis was conducted for the intersections summarized in **Table 5-2** Traffic movement counts (TMCs) for each study intersection were collected on January 15, 2025, during weekday AM and PM peak periods.

Table 5-2 List of Modelled and Analysed Intersections within the Traffic Model

Intersection Name	Intersection Type	Date Counted
Taylor Road (Regional Road 70) and Thorold Stone Road (Regional Road 57)	Signalized	January 15, 2025
Taylor Road (Regional Road 70) and Walker Landfill East Access	Signalized	January 15, 2025
Taylor Road (Regional Road 70) and Mountain Road (Regional Road 101)	Signalized	January 15, 2025
Taylor Road (Regional Road 70) and Primary Quarry Access	Stop-controlled	January 15, 2025
Taylor Road (Regional Road 70) and Thorold Townline Road	Stop-controlled	January 15, 2025
Garner Road and Mountain Road (Regional Road 101)	Stop-controlled	January 15, 2025
Beechwood Road and Thorold Stone Road (Regional Road 57)	Stop-controlled	January 15, 2025
Beechwood Road and Taylor Road (Regional Road 70)	Stop-controlled	January 15, 2025
Old Thorold Stone Road and Thorold Townline Road	Stop-controlled	January 15, 2025
Thorold Townline Road and Landfill Northwest Access	Stop-controlled	January 15, 2025
Mountain Road (Regional Road 101) and Quarry Access (maintenance only)	Stop-controlled (assumed)	January 15, 2025
Thorold Townline Road Access and Thorold Public Works Access	Stop-controlled	January 15, 2025

5.1.3 Background Growth

Following consultation with Niagara Region staff, a background corridor growth rate of 2.0% per annum was applied to baseline eastbound and westbound through movements along Thorold Stone Road. Additionally, a 1.0% per annum rate was applied to northbound and southbound through movements along Taylor Road.

Upon confirmation with the Niagara Region staff, background development traffic has not been included in the development of future traffic models, as there are no planned background developments within the vicinity of the study area to be considered.

It should be noted that background growth rates have only been applied to the passenger vehicles and passing heavy vehicles, as the site-bound heavy vehicles (trucks containing quarry and landfill materials) are not expected to grow based on the project site's operational capacity.

5.1.4 Trip Generation

Heavy vehicle traffic volumes collected in 2023 associated with the transport of landfill waste to and from the existing South Landfill (Phase 1) were used as a proxy, to identify site traffic volumes for proposed Phase 2 operations. Phase 2 is expected to maintain comparable (following an applied multiplier) annual volume and daily limit of solid, non-hazardous waste from residential and industrial, commercial, and institutional (IC&I) sources currently accepted at Phase 1. Existing inbound and outbound landfill and quarry trips to/from the project site were removed from the existing TMC data. New site trips are shown in **Table 5-3** which have been added to network trips to develop future total traffic conditions volumes. These trips have been applied in reference to the average daily and hourly volumes of recoded existing recorded landfill and quarry vehicle vehicles being received at the project site. Refer to Figures 8-2 'Average Trucks per Day of Week' and Figure 8-4 'Average Trucks per Day by Hour' within WSP's Facility Characteristics Report – South Landfill Phase 2 (December 2025) for the average landfill vehicles recorded at the project site. Quarry truck volumes were calculated by prorating the number of trucks per day based on the annual quarry production of 425, 000 tonnes and a typical truck payload of 25 tonnes. Peak hour volume to daily volume ratios as observed for landfill trucks were applied to the calculated daily quarry truck volumes to determine the hourly volumes. A similar approach was applied to calculate the hourly landfill truck volumes for filling operations within the East Landfill Cell 16.

To reflect the "phased-in" approach anticipated during Horizon 1, where both Phase 1 and Phase 2 landfills are partially operational, the average 2023 landfill vehicle volumes were increased by 25 percent. This adjustment accounts for overlapping activities at both sites. Additionally, 2023 traffic volumes for quarry-bound vehicles were applied to represent a conservative scenario in which the quarry remains fully operational while Phase 2 landfill operations gradually increase.

For Horizon 2, the 2023 average landfill vehicle volumes were again applied, but not increased, with the assumption that Phase 2 will fully replace Phase 1 with equal inbound and outbound traffic. However, all heavy vehicle traffic related to the quarry was assumed to be zero, as the quarry is expected to cease operations in this scenario.

The number of non-heavy vehicles site trips that are currently present under the existing conditions is not expected to change during the transition of operations from Phase 1 into Phase 2.

Table 5-3 One-way Heavy Vehicle Trip Generation

Model Year	Landfill Heavy Vehicles		Quarry Heavy Vehicles	
	AM	PM	AM	PM
Existing Conditions (Year 2025)	28	27	14	13
Localized Assessment (Year 2028)	28	27	14	13
Horizon 1 (Year 2031)	35	34	14	13
Horizon 2 (Year 2034)	46	45	0	0
Horizon 3 (Year 2036)	28	27	0	0

5.1.5 Trip Distribution and Assignment

Quarry and landfill heavy vehicle trips were distributed to the boundary road network based on existing travel patterns observed at study intersections. Site-generated volumes were distributed to the network as shown in **Table 5-4**.

Table 5-4 Heavy Vehicle Trip Distribution

Gateway	Location	AM (IN)	AM (OUT)	PM (IN)	PM (OUT)
N1	Via North of Taylor Road	18%	31%	20%	32%
N2	Via North of Garner Road	0%	0%	0%	0%
E1	Via East of Mountain Road	8%	10%	10%	21%
E2	Via East of Thorold Stone Road	10%	8%	20%	3%
W1	Via West of Old Thorold Stone Road	8%	11%	0%	6%
W2	Via West of Thorold Stone Road	42%	27%	30%	18%
S1	Via South of Taylor Road/Thorold Townline Road	13%	13%	15%	21%
S2	Via South of Beechwood Road	2%	0%	0%	0%
S3	Via South of Garner Road	0%	0%	5%	0%

The assignment of quarry and landfill heavy vehicle trips into the project site was completed with the consideration of the three site access locations (Primary Quarry Access, Landfill East Access and Landfill Northwest Access). All three access locations will be operational for future scenarios. During Horizon 2 and Horizon 3, however, where no quarry-bound traffic is expected, the existing primary quarry access will accommodate passenger cars.

5.1.6 Traffic Capacity Analysis

The traffic capacity analysis identifies how well the intersections and access driveways are operating under existing conditions and how they are expected to operate in the future. The analysis contained in this report utilized the Highway Capacity Manual (HCM) methodology within the Synchro 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.

As part of the capacity analysis, TYLin has detailed the traffic operation at all turning movements at the study intersections. Turning movements were identified and bolded in the summary table, based on the following criteria, as per the Niagara Region Traffic Impact Assessment Guidelines.

- At signalized intersections, movements with a v/c ratio greater than 0.85 and/or LOS "E" or worse are deemed to be "critical" in terms of operations. Movements that exceed those thresholds shall be evaluated for possible operational improvements.
- At unsignalized intersections, movements expected to operate at LOS "D" or worse.

The following Tables summarize the Synchro capacity results for the study intersections during the weekday AM and PM peak hours for future total traffic conditions. Detailed Synchro reports are attached in **Appendix A**.

5.1.7 Future Total Traffic Analysis – Horizon 1 (Year 2031)

The future total traffic volumes during the weekday AM and PM peak hours for the 2031 planning horizon were derived by combining the corresponding estimate of the site-generated heavy vehicle traffic. Resultant traffic operations, including LOS, and operational volume/capacity ratios are shown in **Table 5-5**.

Synchro traffic results are presented in **Appendix A,** and future total traffic volumes are presented in **Appendix B**.

Table 5-5 Future Total Conditions Traffic Analysis - Horizon 1 (2031)

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Signalized Intersections							
Thorold Townline Road/Taylor Road & Thorold Stone Road	*Overall*	*0.62*	*20*	*B*	*0.7*	*22*	*C*
	EBL	0.55	12	B	0.61	15	B
	EBT	0.32	6	A	0.56	13	B
	EBR	0.03	4	A	0.05	8	A
	WBL	0.08	17	B	0.21	20	C
	WBT	0.66	24	C	0.65	25	C
	WBR	0.06	16	B	0.07	17	B
	NBL	0.36	37	D	0.56	34	C
	NBTR	0.59	39	D	0.24	26	C
	SBL	0.19	35	C	0.15	26	C
	SBTR	0.77	40	D	0.83	42	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Taylor Road & East Access	*Overall*	*0.33*	*6*	*A*	*0.39*	*6*	*A*
	EBL	0.08	21	C	0.08	21	C
	EBR	0.16	19	B	0.11	19	B
	NBL	0.08	4	A	0.01	4	A
	NBT	0.27	5	A	0.24	5	A
	SBT	0.24	5	A	0.33	6	A
	SBR	0.02	4	A	0.02	4	A
Taylor Road & Mountain Road	*Overall*	*0.45*	*20*	*B*	*0.38*	*14*	*B*
	WBL	0.73	44	D	0.57	39	D
	WBR	0.29	32	C	0.26	34	C
	NBTR	0.4	11	B	0.36	11	B
	SBL	0.06	5	A	0.15	5	A
	SBT	0.15	6	A	0.28	6	A
Stop-controlled Intersections							
Taylor Road & Primary Quarry Access	EBL	0.03	16	C	0.14	19	C
	EBR	0.01	10	B	0.03	13	B
	NBL	0.01	8	A	0.01	10	A
	NBT	0.21	0	A	0.17	0	A
	SBTR	0.14	0	A	0.29	0	A
Taylor Road & Thorold Townline Road	EBL	0.04	13	B	0.11	13	B
	EBR	0.04	13	B	0.11	13	B
	NBL	0.04	8	A	0.06	10	A
	NBT	0.2	0	A	0.17	0	A
	SBTR	0.2	0	A	0.28	0	A
Mountain Road & Garner Road	EBLTR	0	0	A	0	0	A
	WBLTR	0.02	1	A	0.03	1	A
	NBLTR	0.11	11	B	0.1	12	B
	SBLTR	0.02	12	B	0.01	15	C
Beechwood Road & Thorold Stone Road	EBLT	0.33	2	A	0.48	1	A
	EBR	0	0	A	0.01	0	A
	WBTR	0.31	0	A	0.3	0	A
	NBLTR	0.36	**79**	**F**	0.64	**196**	**F**
	SBLTR	0.39	**108**	**F**	0.68	**201**	**F**
Taylor Road & Beechwood Road	WBLR	0.07	2	B	0.05	10	B
	NBTR	0.21	0	A	0.19	0	A
	SBL	0.02	1	A	0.03	8	A
	SBT	0.21	0	A	0.28	0	A
Thorold Townline Road & Old Thorold Stone Road	EBLR	0.07	10	A	0.04	9	A
	NBLT	0.03	3	A	0.01	2	A
	SBTR	0.02	0	A	0.06	0	A
Thorold Townline Road/Access Road & North West Access Road	EBLTR	0.01	7	A	0.03	7	A
	WBLTR	0.07	7	A	0.04	7	A
	NBLTR	0.08	8	A	0.09	8	A
	SBLTR	0.01	7	A	0.09	8	A
Quarry Access & Mountain Road	EBTR	0.1	0	A	0.17	0	A
	WBLT	0	0	A	0	0	A
	NBLR	0	12	B	0	0	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Thorold Townline Road & Thorold Public Works Access/Landfill West Access	EBLTR	0.01	9	A	0	9	A
	WBLTR	0	9	A	0.01	9	A
	NBLTR	0	0	A	0	0	A
	SBLTR	0	1	A	0	0	A

Under future total traffic conditions for Horizon 1, the study intersections generally operate at acceptable levels, with manageable delays and v/c ratios during both the AM and PM peak periods.

At the intersection of Beechwood Road & Thorold Stone Road, the northbound left-through-right (NBLTR) and southbound left-through-right (SBLTR), however, operate with high delays and a Level of Service (LOS) of 'F'. While these movements are identified as critical per Niagara Region's transportation impact guidelines, it is noted that they already operate at LOS 'F' under existing conditions. The additional delay observed under Horizon 1 is primarily due to the application of a two percent annual corridor growth factor for through movements along Thorold Stone Road. Site-related traffic, under both existing and Horizon 1 conditions, generally does not travel northbound or southbound at this intersection. Site related traffic therefore does not meaningfully contribute to the critical delays observed.

Due to the significant volumes in the eastbound and westbound direction in contrast to the significantly lower volumes in the northbound and southbound direction, a traffic signal is not recommended at this intersection. Similarly, additional dedicated left and right turn lanes are also not expected to improve delays. While delays are high for the minor approach, no improvements are recommended due to the low number of vehicles travelling northbound and southbound.

5.1.8 Future Total Traffic Analysis – Horizon 2 (Year 2034)

The future total traffic volumes during the weekday AM and PM peak hours for the 2034 planning horizon were derived by combining the corresponding estimate of the site-generated heavy vehicle traffic. Resultant traffic operations, including LOS, and operational volume/capacity ratios are shown in **Table 5-6.**

Synchro traffic results are presented in **Appendix A,** and future total traffic volumes are presented in **Appendix B**.

Table 5-6 Future Total Conditions Traffic Analysis - Horizon 2 (2034)

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Signalized Intersections							
Thorold Townline Road/Taylor Road & Thorold Stone Road	*Overall*	0.57	15	B	0.67	22	C
	EBL	0.34	6	A	0.62	15	B
	EBT	0.03	4	A	0.06	9	A
	EBR	0.08	17	B	0.24	23	C
	WBL	0.70	25	C	0.74	29	C
	WBT	0.06	16	B	0.06	19	B
	WBR	0.36	37	D	0.47	29	C

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	NBL	0.60	39	D	0.24	25	C
	NBTR	0.19	34	C	0.17	25	C
	SBL	0.77	40	D	0.84	42	D
	SBTR	0.34	6	A	0.41	6	A
Taylor Road & East Access	*Overall*	0.08	21	C	0.08	21	C
	EBL	0.16	19	B	0.11	19	B
	EBR	0.08	4	A	0.01	4	A
	NBL	0.28	5	A	0.24	5	A
	NBT	0.25	5	A	0.34	6	A
	SBT	0.02	4	A	0.03	4	A
	SBR	0.46	20	B	0.40	14	B
Taylor Road & Mountain Road	*Overall*	0.74	45	D	0.59	39	D
	WBL	0.29	32	C	0.26	33	C
	WBR	0.40	11	B	0.38	11	B
	NBTR	0.06	5	A	0.16	5	A
	SBL	0.15	6	A	0.32	6	A
	SBT	0.57	15	B	0.67	22	C
Stop-controlled Intersections							
Taylor Road & Primary Quarry Access	EBL	0.03	16	C	0.15	20	C
	EBR	0.00	10	A	0.04	13	B
	NBL	0.01	8	A	0.00	8	A
	NBT	0.22	0	A	0.17	0	A
	SBTR	0.14	0	A	0.30	0	A
Taylor Road & Thorold Townline Road	EBL	0.05	13	B	0.11	14	B
	EBR	0.00	0	A	0.00	0	A
	NBL	0.04	8	A	0.06	10	A
	NBT	0.21	0	A	0.18	0	A
	SBTR	0.21	0	A	0.29	0	A
Mountain Road & Garner Road	EBLTR	0.00	0	A	0.00	0	A
	WBLTR	0.02	1	A	0.60	1	A
	NBLTR	0.11	11	B	2.50	12	B
	SBLTR	0.02	12	B	0.20	14	B
Beechwood Road & Thorold Stone Road	EBLT	0.35	0	A	0.51	0	A
	EBR	0.00	0	A	0.00	0	A
	WBTR	0.33	0	A	0.32	0	A
	NBLTR	0.43	**101**	**F**	0.88	**331**	**F**
	SBLTR	0.47	**141**	**F**	0.84	**284**	**F**
Taylor Road & Beechwood Road	WBLR	0.07	12	B	0.05	10	B
	NBTR	0.22	0	A	0.19	0	A
	SBL	0.02	8	A	0.03	8	A
	SBT	0.22	0	A	0.29	0	A
Thorold Townline Road & Old Thorold Stone Road	EBLR	0.07	10	A	0.04	9	A
	NBLT	0.03	3	A	0.01	2	A
	SBTR	0.02	0	A	0.06	0	A
Thorold Townline Road/Access Road & North West Access Road	EBLTR	0.01	7	A	0.03	7	A
	WBLTR	0.07	7	A	0.04	7	A
	NBLTR	0.08	8	A	0.09	8	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBLTR	0.01	7	A	0.09	8	A
Quarry Access & Mountain Road	EBTR	0.10	0	A	0.17	0	A
	WBLT	0.00	0	A	0.00	0	A
	NBLR	0.00	12	B	0.00	0	A
Thorold Townline Road & Thorold Public Works Access/Landfill West Access	EBLTR	0.01	9	A	0.00	9	A
	WBLTR	0.00	9	A	0.01	9	A
	NBLTR	0.00	0	A	0.00	0	A
	SBLTR	0.00	1	A	0.00	0	A

Under Horizon 2 traffic conditions, most study intersections continue to operate at acceptable levels, with satisfactory v/c ratios and manageable delays during both the AM and PM peak periods.

As observed in Horizon 1, the northbound left-through-right (NBLTR) and southbound left-through-right (SBLTR) movements at the Beechwood Road & Thorold Stone Road intersection continue to experience high delays and operate at a LOS 'F'. These movements remain critical as per Niagara Region's transportation impact guidelines under both AM and PM conditions. Compared to Horizon 1, the delays for these specific movements increase further under Horizon 2 conditions, despite a reduced number of site-generated trips - reflecting the impact of 2% annual cumulative growth in background traffic volumes along the corridor. Despite the worsening delay on the minor approach, site-related trips still contribute minimally, as they do not generally make northbound/southbound movement or turns at this intersection.

As in Horizon 1, signalization is not expected to be warranted, resulting from the significantly lower minor approach volumes in comparison to those on the major approaches. Additional turn lane improvements are also recommended here as they do not improve traffic conditions. As in Horizon 1, a traffic signal is not recommended at the Beechwood Road & Thorold Stone Road intersection.

5.1.9 Future Total Traffic Analysis – Horizon 3 (Year 2036)

The future total traffic volumes during the weekday AM and PM peak hours for the 2036 planning horizon were derived by combining the corresponding estimate of the site-generated heavy vehicle traffic. Resultant traffic operations, including LOS, and operational volume/capacity ratios are shown in **Table 5-7**.

Synchro traffic results are presented in **Appendix A,** and future total traffic volumes are presented in **Appendix B**.

Table 5-7 Future Total Conditions Traffic Analysis - Horizon 3 (2036)

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Signalized Intersections							
Thorold Townline Road/Taylor Road & Thorold Stone Road	*Overall*	*0.65*	*20*	*B*	*0.73*	*22*	*C*
	EBL	0.58	16	B	0.65	18	B
	EBT	0.35	6	A	0.62	14	B
	EBR	0.03	4	A	0.05	8	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	WBL	0.08	16	B	0.23	20	C
	WBT	0.70	24	C	0.70	26	C
	WBR	0.05	15	B	0.05	17	B
	NBL	0.36	37	D	0.57	35	C
	NBTR	0.60	39	D	0.23	26	C
	SBL	0.19	35	C	0.15	26	C
	SBTR	0.76	40	D	0.83	42	D
Taylor Road & East Access	*Overall*	*0.33*	*5*	*A*	*0.40*	*5*	*A*
	EBL	0.05	26	C	0.04	24	C
	EBR	0.11	21	C	0.08	21	C
	NBL	0.05	3	A	0.01	3	A
	NBT	0.25	4	A	0.22	4	A
	SBT	0.23	4	A	0.30	5	A
	SBR	0.02	3	A	0.01	3	A
Taylor Road & Mountain Road	*Overall*	*0.45*	*20*	*B*	*0.38*	*14*	*B*
	WBL	0.74	45	D	0.57	39	D
	WBR	0.29	32	C	0.27	34	C
	NBTR	0.40	11	B	0.36	11	B
	SBL	0.06	5	A	0.15	5	A
	SBT	0.15	6	A	0.29	6	A
Stop-controlled Intersections							
Taylor Road & Primary Quarry Access	EBL	0.02	15	C	0.12	18	C
	EBR	0.00	10	A	0.03	13	B
	NBL	0.01	8	A	0.00	9	A
	NBT	0.22	0	A	0.17	0	A
	SBTR	0.15	0	A	0.30	0	A
Taylor Road & Thorold Townline Road	EBL	0.04	12	B	0.11	13	B
	EBR	0.04	12	B	0.11	13	B
	NBL	0.04	8	A	0.05	9	A
	NBT	0.21	0	A	0.18	0	A
	SBTR	0.20	0	A	0.29	0	A
Mountain Road & Garner Road	EBLTR	0.00	0	A	0.00	0	A
	WBLTR	0.02	1	A	0.03	1	A
	NBLTR	0.11	11	B	0.10	12	B
	SBLTR	0.02	12	B	0.01	15	C
Beechwood Road & Thorold Stone Road	EBLT	0.37	1	A	0.53	0	A
	EBR	0.00	0	A	0.01	0	A
	WBTR	0.34	0	A	0.33	0	A
	NBLTR	0.43	**102**	**F**	1.06	**442**	**F**
	SBLTR	0.41	**130**	**F**	0.96	**350**	**F**
Taylor Road & Beechwood Road	WBLR	0.06	12	B	0.05	10	B
	NBTR	0.22	0	A	0.19	0	A
	SBL	0.02	8	A	0.03	8	A
	SBT	0.22	0	A	0.29	0	A
Thorold Townline Road & Old Thorold Stone Road	EBLR	0.06	10	A	0.04	9	A
	NBLT	0.02	3	A	0.01	2	A
	SBTR	0.02	0	A	0.06	0	A

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Thorold Townline Road/Access Road & North West Access Road	EBLTR	0.01	7	A	0.03	7	A
	WBLTR	0.07	7	A	0.04	7	A
	NBLTR	0.08	8	A	0.07	8	A
	SBLTR	0.01	7	A	0.09	8	A
Quarry Access & Mountain Road	EBTR	0.10	0	A	0.17	0	A
	WBLT	0.00	0	A	0.00	0	A
	NBLR	0.00	12	B	0.00	0	B
Thorold Townline Road & Thorold Public Works Access/Landfill West Access	EBLTR	0.01	9	A	0.00	9	A
	WBLTR	0.00	9	A	0.01	9	A
	NBLTR	0.00	0	A	0.00	0	A
	SBLTR	0.00	1	A	0.00	0	A

Under Horizon 3 traffic conditions, most study intersections continue to operate at acceptable levels, with satisfactory v/c ratios and manageable delays during both the AM and PM peak periods.

As observed in Horizons 1 and 2, the northbound left-through-right (NBLTR) and southbound left-through-right (SBLTR) movements at the Beechwood Road & Thorold Stone Road intersection continue to experience high delays and operate at a LOS 'F'. Compared to Horizons 1 and 2, the delays for these specific movements increase further under Horizon 3 conditions, despite a reduced number of site generated trips as the impact is associated to the compounding growth in background corridor volumes. Despite the worsening delay on the minor approach, site-related trips still contribute minimally, as they do not generally make northbound/southbound movement or turns at this intersection.

As in Horizon 1 and 2, signalization is not expected to be warranted resulting from the significantly lower minor approach volumes in comparison to those on the major approaches. Additional turn lane improvements are also recommended here as they do not improve traffic conditions; similarly, a traffic signal is not warranted at the Beechwood Road & Thorold Stone Road intersection.

5.2 Temporary Closure of Taylor Road

A tunnel is planned to be constructed beneath Taylor Road, which is expected to require a temporary localized closure of the roadway at the tunnel crossing during construction. Depending on the construction staging and traffic management plan, this closure could involve either partial lane restrictions or a full closure of Taylor Road at that location. To assess the potential impacts in a conservative manner, the analysis considered a **full closure** scenario, representing the most restrictive condition for traffic operations. The network impacts associated with this closure were evaluated for the 2028 future horizon year using the study area traffic model. The results presented in this section summarize the anticipated traffic redistribution and operational effects resulting from the closure.

It is noted that the temporary closure will require the preparation of appropriate plans and processes to ensure seamless operations. This includes a detailed signage plan, a construction traffic management plan, and the acquisition of appropriate road closure permits. In addition, a

communications plan that alerts commuters and workers of the closure must be authored. It is recommended that messaging regarding the closure be conveyed 2 weeks before the road closure.

5.2.1 Interim Traffic Conditions

To reflect the full closure of Taylor Road between Mountain Road and the primary site access (north of Beechwood Road), and the associated operational changes during this temporary construction period, adjustments were made to the site access assumptions within the localized traffic analysis. These adjustments were implemented within the 2028 model scenario to represent a reasonable redistribution of site traffic during the temporary closure period and to evaluate the resulting operational impacts on the surrounding road network.

All site inbound and outbound trips originating from or destined to areas north of the study area, which would typically use Taylor Road to access the site via the Primary Quarry Access, were reassigned to alternative routes to maintain connectivity. Similarly, trips originating from or destined to areas south of the study area were assumed to access the site via the Primary Landfill East Access.

Non-site related traffic utilizing Taylor Road was detoured east on both Thorold Stone Road and Mountain Road to both Garner Road and Kalar Road (approximately 2km east). It is noted that Garner Road was considered as a primary detour option, however the lack of signalization at the Thorold Stone Road/Garner Road intersection, and the more residential nature of that roadway deemed it unsuitable as a primary detour route. Some trips are routed via Garner Road, are assessed below.

The traffic analysis results, including LOS and volume/capacity ratios for the temporary, full road closure are shown in **Table 5-8** and Synchro traffic results are presented in **Appendix G.**

Table 5-8 Interim Conditions Traffic Analysis – 2028 (Taylor Road Closure)

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
Signalized Intersections							
Thorold Townline Road/Taylor Road & Thorold Stone Road	*Overall*	*0.42*	*10*	*A*	*0.67*	*10*	*A*
	EBL	0.11	4	A	0.04	4	A
	EBT	0.38	5	A	0.54	6	A
	EBR	0.04	4	A	0.04	3	A
	WBL	0.15	8	A	0.70	22	C
	WBT	0.24	8	A	0.45	7	A
	WBR	0.01	6	A	0.00	4	A
	NBL	0.16	36	D	0.38	39	D
	NBTR	0.63	40	D	0.51	40	D
	SBL	0.03	35	D	0.05	36	D
	SBTR	0.10	36	D	0.14	37	D
Taylor Road & East Access	*Overall*	*0.05*	*14*	*B*	*0.01*	*17*	*B*
	EBR	0.05	21	C	0.02	21	C
	NBL	0.04	3	A	0.01	3	A
Taylor Road & Mountain Road	*Overall*	*0.22*	*28*	*C*	*0.44*	*20*	*C*
	WBR	0.31	37	D	0.27	37	D

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c	Delay (s)	LOS	v/c	Delay (s)	LOS
	SBL	0.20	4	A	0.45	5	A
Stop-controlled Intersections							
Taylor Road & Primary Quarry Access	EBL	0.06	13	B	0.15	16	C
	EBR	0.00	9	A	0.02	0	B
	NBL	0.01	8	A	0.00	0	A
	NBT	0.21	0	A	0.17	0	A
	SBTR	0.14	0	A	0.29	0	A
Taylor Road & Thorold Townline Road	EBL	0.03	9	A	0.06	9	A
	NBL	0.03	7	A	0.02	7	A
	NBT	0.00	0	A	0.00	0	A
	SBTR	0.02	0	A	0.01	0	A
Mountain Road & Garner Road	EBLTR	0.00	0	A	0.00	0	A
	WBLTR	0.16	7	A	0.17	8	A
	NBLTR	**1.3**	**186**	**F**	**1.63**	**335**	**F**
	SBLTR	0.02	14	B	0.02	2	D
Beechwood Road & Thorold Stone Road	EBLT	0.00	0	A	0.00	0	A
	EBR	0.44	0	A	0.59	0	A
	WBTR	0.37	0	A	0.42	0	A
	NBLTR	0.68	**19**	**F**	0.45	**289**	**F**
	SBLTR	0.48	**12**	**F**	0.70	**446**	**F**
Taylor Road & Beechwood Road	WBLR	0.02	9	A	0.00	8	B
	NBTR	0.00	0	A	0.00	0	A
	SBL	0.01	7	A	0.00	7	A
	SBT	0.01	0	A	0.00	0	A
Thorold Townline Road & Old Thorold Stone Road	EBLR	0.07	10	A	0.04	9	A
	NBLT	0.02	2	A	0.00	2	A
	SBTR	0.02	0	A	0.06	0	A
Thorold Townline Road/Access Road & North West Access Road	EBLTR	0.02	8	A	0.04	7	A
	WBLTR	0.06	7	A	0.04	7	A
	NBLTR	0.10	8	A	0.07	8	A
	SBLTR	0.03	8	A	0.05	7	A
Quarry Access & Mountain Road	EBTR	0.10	0	A	0.17	0	A
	WBLT	0.00	0	A	0.00	0	A
	NBLR	0.00	14	B	0.00	15	B
Thorold Townline Road & Thorold Public Works Access/Landfill West Access	EBLTR	0.01	9	A	0.00	9	A
	WBLTR	0.00	9	A	0.00	9	A
	NBLTR	0.00	0	A	0.00	0	A
	SBLTR	0.00	1	A	0.00	0	A

Observed across all three horizons, the NBLTR and SBLTR movements at the intersection of Beechwood Road and Thorold Stone Road experience an LOS F. For the AM peak under temporary conditions, the delays for these movements are not as significant when compared to Future Total Horizons 1, 2 and 3. Delays under the 2028 interim conditions are as low as 19 seconds (NBLTR) and 12 seconds (SBLTR) in the AM peak hour.

Comparing the PM delays under interim conditions to the Future Total Horizons, the delays peak at 446, representing the highest value across all study scenarios. The NBLTR delays reach 289, which falls within the range observed under the Future Total Horizons (i.e., 196 through 442). Reiterating the findings for the Beechwood Road and Thorold Stone Road per the Future Total horizons, despite the delays for this intersection worsening, the site-related volumes observed for NBLTR and SBLTR movements are negligible. Under the PM peak, approximately 7 and 11 vehicles, respectively, complete northbound/southbound movements. Given the low nature of these values, no improvements are required.

The intersection of Mountain Road and Garner Road operates with an LOS of F for the NBLTR movement. This is primarily triggered by the approximately 357 and 345 vehicles making northbound left-turning movements onto Mountain Road during the AM and PM peaks, respectively. The redistribution of traffic from Taylor Road and the need for alternative southbound travel on Garner Road result in higher volumes, increasing overall wait times for traffic making northbound left turns. Mitigating the delays observed for the NBLTR movement, it is recommended that a temporary signal be installed at the intersection.

Given the short-term nature of the interim conditions, suboptimal operations for select movements at a limited number of intersections are not forecasted to result in major repercussions for the road network. Where critical movements are observed (Garner and Mountain Road), the temporary signal will alleviate delays. Therefore, under temporary conditions when limitations for travel along Taylor Road apply, the study intersections operate at acceptable levels, with manageable delays and v/c ratios during both the AM and PM peak periods.

5.3 Potential Effects on Transportation

As concluded within **Sections 5.1.7** through **5.1.9**, and **Section 5.2.1**, study area traffic conditions generally continue to operate with acceptable delays and v/c ratios at key study intersections. Other impacts which were considered in the Transportation Comparative Evaluation Memo include future collision incidence, intersection and stopping-sight distances, in addition to vehicular movement diagrams. The results of the analysis pertaining to each are presented below, focusing on future total horizons only.

5.3.1 Collision Assessment

The Safety Performance Function (SPF) is a statistical model, based on the Highway Safety Manual (1st Edition) and Traffic and Highway Engineering (SI Edition, 5th Edition), that estimates how many crashes a roadway segment is likely to experience based on factors such as average annual daily traffic (AADT). Using negative-binomial regression, the SPF accounts for the extra variability (or overdispersion) observed in real-world crash data through an overdispersion parameter (k). To further enhance realism, the model can be adjusted with site-specific variables such as lane and shoulder widths and types, the presence and number of exclusive left and right turn lanes, intersection lighting, and other roadway characteristics to ensure the predictions closely reflect real-world conditions.

Two key values are derived from each SPF: the predicted crash frequency, which reflects the average expected number of crashes for sites with similar conditions; and the expected crash frequency, which adjusts that prediction by incorporating site-specific characteristics, especially the existing collision history as the basis for calibration. This ensures that current conditions are reflected in long-term projections.

In **Table 5-9**, each roadway segment is shown with its predicted and expected crash frequencies for the years 2025, 2031, and 2036. For comparison, the total number of collisions recorded over the past five years, and the five-year average are also included to contextualize the projections. Further details for the calculation of predicted and expected collisions are provided in **Appendix C.**

Table 5-9 Future Conditions Collision Assessment

Road Intersection/Segment	Observed number of collisions over 2020-2024	Observed average yearly collision rate over 2020-2024	2025		2031		2036	
			Predicted	Expected	Predicted	Expected	Predicted	Expected
Garner Road & Mountain Road	1	0.2	1.380	1.087	1.431	1.116	1.474	1.141
Taylor Road & Mountain Road	4	0.8	3.876	2.956	4.066	3.056	4.231	3.141
Taylor Road & Beechwood Road	1	0.2	0.754	0.594	0.791	0.614	0.823	0.631
Thorold Stone Road & Taylor Road/Thorold Townline Road	28	5.6	7.515	6.581	8.369	6.775	9.155	6.930
Thorold Stone Road & Beechwood Road	5	1	1.984	1.497	2.194	1.573	2.376	1.633
Thorold Stone Road & Garner Road	10	2	7.515	4.009	8.070	4.105	8.564	4.182
Mountain Road between Garner Road and Taylor Road	4	0.8	0.638	0.668	0.677	0.701	0.712	0.729
Taylor Road between Mountain Road & Beechwood Road	2	0.4	1.209	0.998	1.283	1.042	1.348	1.080
Taylor Road between Beechwood Road & Thorold Townline Road	1	0.2	0.873	0.705	0.926	0.737	0.974	0.765
Taylor Road between Thorold Townline Road & Highway 58 & Thorold Stone Road & Thorold Townline Road	5	1	0.356	0.535	0.623	0.691	0.397	0.578
Garner Road Between Reta Street & Swart Street	2	0.4	0.346	0.348	0.346	0.348	0.346	0.348
Thorold Townline Road between Dead End & Old Thorold Stone Road	3	0.6	0.216	0.239	0.216	0.239	0.216	0.239

5.3.2 Sightline Assessment

For this project, two types of sightline assessments were completed: Intersection Sight Distance (ISD) and Stopping Sight Distance (SSD). Both evaluations followed the TAC Geometric Design Guide Chapter 2 for SSD and Chapter 9 for ISD.

Intersection Sight Distance Assessment

According to TAC guidelines, ISD was assessed only at the Primary Quarry Access. This is because the Landfill East Access is signalized (Case D – Section 9.9.2, Chapter 9), and the Landfill Northwest Access is controlled by an All-Way Stop (Case E – Section 9.9.2, Chapter 9). In both cases, TAC does not recommend evaluating departure sight triangles.

At the Primary Quarry Access, the sightlines were found to be clear and unobstructed. Sight distances were calculated based on the posted speed of 70 km/h and a design speed of 90 km/h along Taylor Road. The following is the required ISD associated with the truck profile used in the analysis:

- The required ISD for a left turn from stop (Case B1) is 305 metres.
- The required ISD for a right turn from the minor road (Case B2) is 280 metres.

Full details of the sightline assessments are provided in **Appendix D**.

Stopping Sight Distance Assessment

SSD assessments for both horizontal and vertical alignments were completed for all three site accesses: Primary Quarry Access, Landfill East Access, and Landfill Northwest Access.

For the Primary Quarry Access and the Landfill East Access, located along Taylor Road, the posted speed is 70 km/h – attributing to the conservative design speed assumption of 90 km/h. Based on these conditions, the required SSD is 160 metres, in accordance with TAC standards (Table 2.5.2, Chapter 2). Similarly, at the Landfill Northwest Access, located along Thorold Townline Road which has a posted speed limit of 50 km/h, and hence an assumed design speed of 70 km/h, the SSD requirement is 105 metres.

In all cases, the available sightlines for both horizontal and vertical alignments were found to be clear and unobstructed. Details of the horizontal SSD and vertical SSD assessments are provided in **Appendix D**.

5.3.3 Vehicle Movement Diagrams (VMD)

A vehicular swept path analysis was carried out for all site accesses, and vehicular movement diagrams (VMDs) were prepared using AutoTURN Analysis software. The truck profile used in the analysis was the Quad Axle Level 1 and 2 – Class Transportation Truck, as it closely resembles the existing vehicles operating at the site, particularly in terms of the number of axles and overall dimensions.

No operational concerns or issues related to insufficient space for truck turning maneuvers were identified at any of the site accesses.

All vehicle swept path analysis has been compiled and is presented in **Appendix E.**

5.4 Proposed Mitigation and Compensation Measures

Traffic analysis results indicate that site-generated trips do not cause any study intersections to operate at critical operational levels under future total conditions. It is noted that the intersection of Mountain Road and Garner Road experiences an LOS of 'F' under interim conditions due to the site-driven closure of Taylor Road south of Mountain Road, however this is understood to be a short-term construction related condition and will be managed by temporary traffic measures.

The large delays observed under existing conditions on the north and south legs of the Beechwood Road & Thorold Stone Road intersection under all scenarios (including interim conditions) continue to grow under the future conditions, but not due to site-generated trips. Furthermore, due to the large discrepancy in volumes between east-west and north-south traffic volumes, a change away from free-flow conditions for the major road is not recommended.

Finally, a temporary signal for the intersection of Mountain Road and Garner Road is recommended to address the LOS F observed for NBLTR movements during the interim short-term closure of Taylor Road south of Mountain Road for tunnel construction. This is detailed in **Table 5-10**.

5.5 Net Effects

5.5.1 Net Effects Table – Summary of Preferred Method

Per **Table 5-10** which was adapted from TYLin's Comparative Evaluation Memorandum, the associated net effects according to traffic operations, road safety and geometry, in addition to environmental impacts for the preferred method, are summarized below. To summarize, the selection of Option A for the Landfill Configuration and Leachate Management results in little to no effect across the criteria.

Table 5-10 Net Effects Table (Preferred Method)

Criteria	Indicator	Potential Effects (Preferred Method)	Impact Management Measures	Net Effects
Effect on Traffic	Operational LOS at Intersections around the Subject Site	– High delays for NB and SB traffic at intersection of Beechwood Road & Thorold Stone Road will remain during horizon 1 and 2. These delays are generally not associated with site-generated traffic. – No change in safety conditions. – No change in horizontal and	– N/A	– Low to no effect on operational level of service.

		vertical sightlines at site access locations.		
	**Temporary Conditions:* Closure of Taylor Road	– Per **Section 5.2.1**, most operations are deemed acceptable, functioning at an LOS D or greater.	– For the intersection of Mountain and Garner Road, LOS F is addressed through the recommendation of a temporary signal, mitigating any repercussions for traffic operations.	– Low to no effect on operational level of service.
Road Safety and Geometry	Traffic Collision Assessment	– No change in safety conditions.	– N/A	– No effect on safety conditions.
	Vertical and Horizontal Sightlines	– No change in horizontal and vertical sightlines at site access locations.	– N/A	– No effect on horizontal and vertical sightlines at site access locations.
Environmental	Impacts to Natural Environment	- There are no potential environmental effects of the Preferred Method	- As the traffic analysis details a net reduction in site-related traffic under future conditions, there are no new impact management measures required to support the Preferred Method from a transportation perspective in relation to environmental impacts.	- Low to no effect from a transportation perspective.

5.5.2 Common Receptors

Appendix F presents the applicable site-generated heavy truck traffic along segments near each of the corresponding common receptors identified for this study. The data for the common receptors presents values across each traffic analysis horizon (i.e., Existing, Future Background and Future Total) completed for this impact assessment.

6 Cumulative Impact Analysis

As part of the approved Terms of Reference (ToR), Walker committed to assessing the cumulative effects of the landfill and other Campus components/facilities and other non-Walker projects that are existing, planned, approved or reasonably foreseeable.

6.1 Residential Drop-Off (RDO) at the Walker Campus

The cumulative effects of the Potential Future Residential Drop-Off Facility are also considered. It is understood that the Campus operates an existing RDO facility, and the proposal involves a relocation of this activity within the subject site. At present, RDO-based trips account for 433 vehicle trips, on average, per day. Over the long term (2030), average daily vehicle trips could increase to 500 per day.

TYLin acknowledges that relocation of the RDO may impact traffic distribution within the study area, specifically internally around the site and away from the boundary road network. Based on professional engineering judgement, it is expected that visitors using the RDO facility will continue to primary access/egress the subject site via the intersection of Thorold Stone Road and Taylor Road, and following Taylor Road towards Beechwood Road instead of turning at Thorold Townline Road. Accordingly, the impact of the relocated RDO on internal trip distribution is nominal, and no impact is considered to the boundary road network.

From a transportation perspective, traffic volumes captured through existing conditions data collection already account for RDO-based trips, as all trips on the study road network are assessed. In turn, future increases were also incorporated into the preceding traffic analysis through the application of annual background growth rates to study corridors, which conservatively increase corridor volumes through each study horizon. Accordingly, the addition of up to 67 new vehicle trips per day, and a fraction of those daily trips occurring during the AM and PM peak hours, would be reflected in the traffic analysis enclosed in **Section 5.1**.

As the traffic analysis for Horizons 1, 2 and 3 presented, no road network repercussions are anticipated based on the proposed work at the Campus. Overall, the elimination of quarry trips will result in a reduction in volumes relative to existing conditions. With this reduction considered, in addition to a nominal forecasted increase in RDO-based trips, the impact of the proposed future RDO facility is negligible. Regarding traffic distribution, where vehicles may navigate towards a select few intersections, the nominal nature of increased RDO traffic (captured through annual growth rates applied to traffic volumes) is not anticipated to impact these locations nor result in a critical LOS.

6.2 Additional Considerations

Additional off-campus initiatives lead by Walker and other organizations occurring in the Niagara and Thorold area are outlined in **Table 6-1** below alongside anticipated impacts. Note that for projects involving development (i.e., new land uses which contribute to traffic along the road network), the analysis completed in **Section 5.1** incorporated a background growth rate which accounts for traffic activity nearby the site and associated with the campus (i.e., use of the RDO under existing and future conditions). Further, as noted in **Section 5.1.3**, correspondence with Niagara Region staff clarified that there are no planned background developments within the study area.

Table 6-1 Additional Considerations and Anticipated Impacts Table

Project	Anticipated Impacts (if Applicable)
On-Campus (Not Discussed at Detail in DIA)	
Expansion of Walker Natural Gas Facilities.	No incremental or additive effects anticipated for transportation indicators.
Off Campus (Walker Projects)	
Uppers Quarry	No clarification on buildout and when activity will begin, therefore, difficult to forecast impacts within context of DIA. Depending on travel patterns, the intersection of Beechwood Road and Thorold Stone Road could experience increased delays in the future due to added traffic, however operating within acceptable levels of service and capacity.
Off-Campus Activities (Non-Walker Projects)	
Garden City Bridge Twinning	No incremental or additive effects anticipated for transportation indicators.
Glendal Secondary Plan Area Development	No incremental or additive effects anticipated for transportation indicators. Horizons of the Transportation Impact Study (2041 and 2051) do not align with that of the DIA.
Master Plan Build Niagara College	Work planned largely pertains to enhancing connections between buildings and renovating existing spaces. A few new buildings are proposed. No clarification on timeline for completion, therefore, no incremental or additive effects anticipated for transportation indicators.
Northwest Secondary Plan	While the study entails one horizon (2031) falling within those applied to the DIA, previous background growth will account for potential traffic impacts. TYLin does not anticipate any major impacts for Campus road network.
Golf Course/Agro Tourism Development East of Site	Land use not anticipated to generate significant traffic. No incremental or additive effects anticipated for transportation indicators.
Garner West Secondary Plan	Area is well-distanced from Campus. No incremental or additive effects anticipated for transportation indicators.
Welland to Thorold Transmission Line	A review of the Final Environmental Study Report conducted by Hydro One states that per Table 5-7 Cumulative Effects Assessment, no significant impacts are forecasted for local roads (Taylor Road/Thorold Stone Road). Further, mitigation measures are stated to be operationalized during transmission line work, including rider poles, boom tipped riders and other efforts to mitigate disruptions.

Overall, no significant impacts are anticipated which stem from the activities identified in **Table 6-1**.

7 Climate Change Considerations

In accordance with the Minister-approved ToR, the detailed impact assessment is to include consideration of climate change. In support of the province of Ontario's Climate Change Action Plan, the Ministry of the Environment, Conservation and Parks (MECP) developed a Guide entitled "Consideration of Climate Change in Environmental Assessment in Ontario" (the Guide) to aid proponents in considering climate change as part of EAs for infrastructure and facilities (MECP 2016).

The Guide outlines the Ministry's expectations for considering climate change throughout the EA process. As stated in Section 3 of the Guide, consideration is to include:

- Greenhouse gas (GHG) emissions;
- Effects of a project on climate change;
- Effects of climate change on a project, and;
- How the project will minimize identified negative effects on climate change.

The elements mentioned above were considered as part of the South Landfill Phase 2 EA in addressing the potential climate risks to the Alternative Methods. During the impact assessment, the climate change adaptation and mitigation analysis undertaken for the Alternative Methods stage was used and augmented, as needed, to develop climate change mitigation and adaptation measures for the Preferred Method. Climate change considerations relevant to transportation are documented in **Sections 7.1** and **7.2**.

7.1 Potential Effects of the Undertaking on Climate Change

No potential effects of the undertaking on climate change are expected based upon projected future transportation conditions. It is noted that the total number of site generated trips are fewer than those generated under existing conditions, and as such, the net transportation-related impact of the undertaking on climate change is negligible.

7.1.1 Mitigation

Mitigation strategies are not applicable due to the negligible effect of the transportation network under future scenario in comparison to existing conditions.

7.2 Potential Effects of Climate Change on the Undertaking

The consideration of the effects of climate change on the undertaking entails investment in both active transportation infrastructure and enhanced transit service. This will provide employees with an alternative means for travelling to the site, thereby reducing single-occupant vehicle (SOV) trips. SOV's are a major contributor to ongoing emissions production, which can be addressed through the provision of a well-integrated, multi-modal mobility network.

A multi-modal review of the existing conditions indicates that pedestrian and cycling facilities are

notably absent in the study area, creating a disconnected environment for active transportation users. Furthermore, the site currently lacks a transit stop, limiting accessibility for employees requiring non-auto access to the site.

Although industrial areas may not traditionally be viewed as ideal locations for dedicated cycling, pedestrian, and transit infrastructure, it is noted that introducing these facilities can support sustainable commuting choices for employees. In particular, e-bikes are growing in popularity within the region, as an affordable alternative to car ownership.

7.2.1 Adaptation

Providing specific recommendations related to investment in transit servicing and the bolstering of active transportation opportunities, consider the following non-exhaustive list:

- Engaging with local transit providers to explore route extensions to serve campus employees. A pilot bus stop along Taylor Road where Niagara Region Transit's (NRT) Route 34 currently operates may be worth exploring. It is recommended that any pilot program commences with an engagement session by NRT to present transit information to employees.
- Providing secure and covered bicycle parking for employees, including for e-bikes to support sustainable travel choices to/from the campus.
- Inviting an Active Transportation Agency and/or advocate to the Campus to provide employees with tools, guidance and other materials to encourage multi-modal commuting and generally, assist with the implementation of Transportation Demand Management strategies over time.

8 Environmental Monitoring

No monitoring is proposed based on TYLin's analysis and accompanying implementation of climate change adaptation measures.

8.1 Development of an Environmental Management Plan

An Environmental Management Plan (EMP) will be prepared following approval of the undertaking by the Minister of the Environment, Conservation and Parks and prior to construction. The EMP will include a description of the proposed mitigation measures, commitments, and monitoring.

9 Commitments

The following commitments have been proposed for ensuring that the identified mitigation or compensation measures and monitoring requirements are carried out as part of the construction, operation, and maintenance of the undertaking:

- Installation of a temporary traffic signal at the intersection of Mountain Road & Garner Road, to manage traffic operations during the temporary closure of Taylor Road (south of Mountain Road) to facilitate tunnel construction in 2028. This applies only in the event of a full closure of Taylor Road, not partial closure conditions, for tunnel construction.

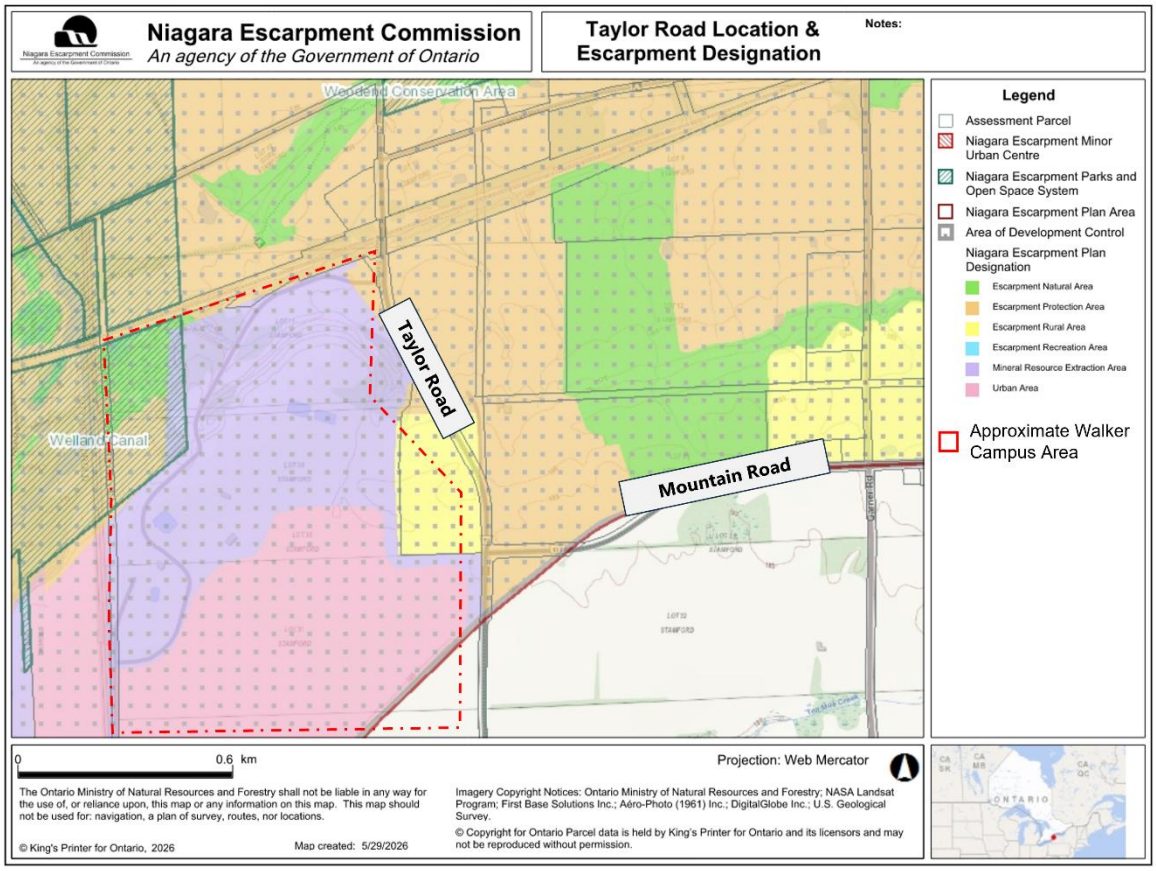
It is noted that no transportation-related commitments are required to support the development and long-term function of the South Landfill as proposed.

10 Transportation Approvals Required

The following approvals are required for transportation-related components for the proposed undertaking:

- For the full closure of Taylor Road, per interim conditions, a **road occupancy or use permit** from the **City of Niagara Falls, and/or the Region of Niagara Falls** (Taylor Road is under jurisdiction of the Region) and;
- A **Niagara Escarpment Commission development permit** for road infrastructure projects as portions of Taylor Road are located within the Escarpment Protection Area, per **Figure 10-1** below.

Figure 10-1 Niagara Escarpment Commission Map Export



11 References

- Niagara Region's Transportation Impact Assessment Guidelines (July 2023)
- City of Thorold's Guidelines for Transportation Impact Studies (March 2018)
- Niagara Region Transportation Master Plan (October 2017)
- Thorold Transportation Master Plan (June 2020)
- 2022 Niagara Official Plan
- Niagara Region Open Data
- Walker Environmental Group Inc. South Landfill Environmental Screening Report (July 2013)

Appendix A:
Future Total Conditions Traffic Analysis Synchro Reports

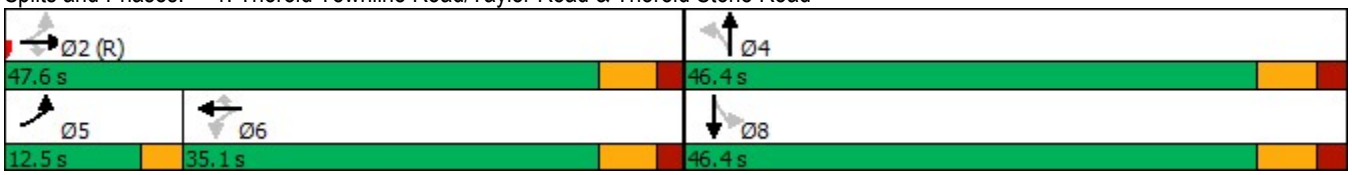
Appendix A Subsection – Future Total Horizon 1: 2031 Volumes (AM & PM)

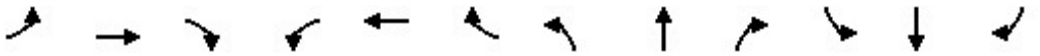
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	734	34	19	898	38	26	118	33	26	71	209
Future Volume (vph)	274	734	34	19	898	38	26	118	33	26	71	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.967			0.888	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1573	3510	1498	1825	3544	1633	1755	1666	0	1534	1464	0
Flt Permitted	0.162			0.350			0.270			0.585		
Satd. Flow (perm)	268	3510	1498	672	3544	1633	499	1666	0	944	1464	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39			74		19			197	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
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
Heavy Vehicles (%)	16%	4%	9%	0%	3%	0%	4%	8%	24%	19%	18%	16%
Adj. Flow (vph)	298	798	37	21	976	41	28	128	36	28	77	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	798	37	21	976	41	28	164	0	28	304	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	69.8	66.7	66.7	39.0	39.0	39.0	14.8	14.8		14.8	14.8	
Actuated g/C Ratio	0.74	0.71	0.71	0.41	0.41	0.41	0.16	0.16		0.16	0.16	
v/c Ratio	0.55	0.32	0.03	0.08	0.66	0.06	0.36	0.59		0.19	0.77	
Control Delay	13.9	6.2	2.2	19.6	25.8	1.9	45.8	40.0		34.6	26.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.9	6.2	2.2	19.6	25.8	1.9	45.8	40.0		34.6	26.4	
LOS	B	A	A	B	C	A	D	D		C	C	
Approach Delay		8.1			24.7			40.9			27.1	
Approach LOS		A			C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	734	34	19	898	38	26	118	33	26	71	209
Future Volume (vph)	274	734	34	19	898	38	26	118	33	26	71	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1573	3510	1498	1825	3544	1633	1755	1666		1534	1464	
Flt Permitted	0.16	1.00	1.00	0.35	1.00	1.00	0.27	1.00		0.59	1.00	
Satd. Flow (perm)	268	3510	1498	672	3544	1633	499	1666		945	1464	
Peak-hour factor, PHF	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)	298	798	37	21	976	41	28	128	36	28	77	227
RTOR Reduction (vph)	0	0	11	0	0	24	0	16	0	0	166	0
Lane Group Flow (vph)	298	798	26	21	976	17	28	148	0	28	138	0
Heavy Vehicles (%)	16%	4%	9%	0%	3%	0%	4%	8%	24%	19%	18%	16%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	66.7	66.7	66.7	39.0	39.0	39.0	14.8	14.8		14.8	14.8	
Effective Green, g (s)	66.7	66.7	66.7	39.0	39.0	39.0	14.8	14.8		14.8	14.8	
Actuated g/C Ratio	0.71	0.71	0.71	0.41	0.41	0.41	0.16	0.16		0.16	0.16	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	533	2490	1062	278	1470	677	78	262		148	230	
v/s Ratio Prot	c0.15	0.23			c0.28			0.09			c0.09	
v/s Ratio Perm	0.25		0.02	0.03		0.01	0.06			0.03		
v/c Ratio	0.56	0.32	0.02	0.08	0.66	0.03	0.36	0.56		0.19	0.60	
Uniform Delay, d1	11.2	5.1	4.0	16.6	22.2	16.3	35.4	36.6		34.4	36.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.3	0.0	0.3	1.8	0.0	1.6	2.0		0.4	3.4	
Delay (s)	12.2	5.5	4.1	16.9	24.0	16.3	37.0	38.6		34.8	40.3	
Level of Service	B	A	A	B	C	B	D	D		C	D	
Approach Delay (s)		7.2			23.6			38.4			39.8	
Approach LOS		A			C			D			D	

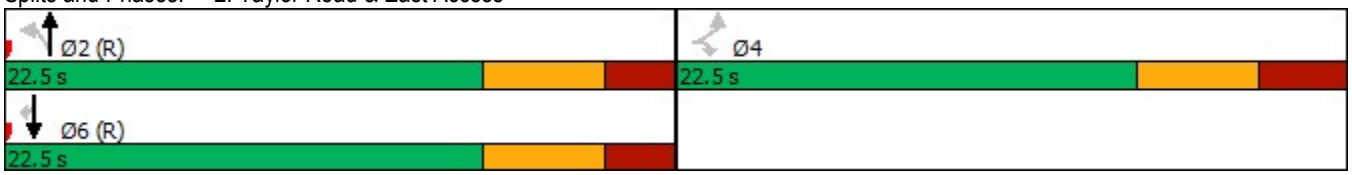
Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	28	29	336	308	16
Future Volume (vph)	15	28	29	336	308	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	913	816	913	1795	1830	933
Flt Permitted	0.950		0.549			
Satd. Flow (perm)	913	816	527	1795	1830	933
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		32				18
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	100%	100%	100%	7%	5%	75%
Adj. Flow (vph)	17	32	33	386	354	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	32	33	386	354	18
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	35.6	35.6	35.6	35.6
Actuated g/C Ratio	0.22	0.22	0.79	0.79	0.79	0.79
v/c Ratio	0.08	0.16	0.08	0.27	0.24	0.02
Control Delay	15.3	8.6	6.3	5.5	5.3	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	8.6	6.3	5.5	5.3	3.7
LOS	B	A	A	A	A	A
Approach Delay	11.0			5.6	5.2	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.27			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	28	29	336	308	16
Future Volume (vph)	15	28	29	336	308	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	913	816	913	1795	1830	933
Flt Permitted	0.95	1.00	0.55	1.00	1.00	1.00
Satd. Flow (perm)	913	816	528	1795	1830	933
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	17	32	33	386	354	18
RTOR Reduction (vph)	0	29	0	0	0	7
Lane Group Flow (vph)	17	3	33	386	354	11
Heavy Vehicles (%)	100%	100%	100%	7%	5%	75%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	4.0	4.0	27.4	27.4	27.4	27.4
Effective Green, g (s)	4.0	4.0	27.4	27.4	27.4	27.4
Actuated g/C Ratio	0.09	0.09	0.61	0.61	0.61	0.61
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	81	72	321	1092	1114	568
v/s Ratio Prot				c0.21	0.19	
v/s Ratio Perm	c0.02	0.00	0.06			0.01
v/c Ratio	0.21	0.04	0.10	0.35	0.32	0.02
Uniform Delay, d1	19.0	18.7	3.7	4.4	4.3	3.5
Progression Factor	1.01	1.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.3	0.6	0.9	0.8	0.1
Delay (s)	21.0	19.3	4.3	5.3	5.0	3.5
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.9			5.2	4.9	
Approach LOS	B			A	A	

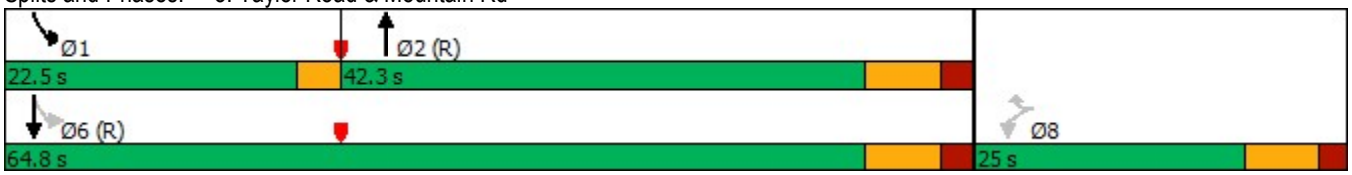
Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	180	84	258	86	38	143
Future Volume (vph)	180	84	258	86	38	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.966			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1722	1570	1650	0	1738	1671
Flt Permitted	0.950				0.471	
Satd. Flow (perm)	1722	1570	1650	0	862	1671
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		97	22			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	4%	12%	14%	5%	15%
Adj. Flow (vph)	207	97	297	99	44	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	97	396	0	44	164
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	14.8	14.8	54.1		65.0	60.7
Actuated g/C Ratio	0.16	0.16	0.60		0.72	0.68
v/c Ratio	0.73	0.29	0.40		0.06	0.15
Control Delay	50.3	9.1	12.0		4.4	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	50.3	9.1	12.0		4.4	6.2
LOS	D	A	B		A	A
Approach Delay	37.2		12.0			5.8
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	180	84	258	86	38	143
Future Volume (vph)	180	84	258	86	38	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1722	1570	1650		1738	1671
Flt Permitted	0.95	1.00	1.00		0.47	1.00
Satd. Flow (perm)	1722	1570	1650		861	1671
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	207	97	297	99	44	164
RTOR Reduction (vph)	0	81	9	0	0	0
Lane Group Flow (vph)	207	16	387	0	44	164
Heavy Vehicles (%)	6%	4%	12%	14%	5%	15%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	14.8	14.8	52.9		60.7	60.7
Effective Green, g (s)	14.8	14.8	52.9		60.7	60.7
Actuated g/C Ratio	0.16	0.16	0.59		0.68	0.68
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	283	258	971		628	1129
v/s Ratio Prot			c0.23		0.00	c0.10
v/s Ratio Perm	c0.12	0.01			0.04	
v/c Ratio	0.73	0.06	0.40		0.07	0.15
Uniform Delay, d1	35.6	31.6	9.9		5.1	5.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.7	0.1	1.2		0.0	0.3
Delay (s)	44.3	31.7	11.1		5.1	5.5
Level of Service	D	C	B		A	A
Approach Delay (s)	40.3		11.1			5.4
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	4	13	331	183	40
Future Volume (vph)	10	4	13	331	183	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.976	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1014	1089	1323	1746	1670	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1014	1089	1323	1746	1670	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	80%	50%	38%	10%	11%	18%
Adj. Flow (vph)	11	4	14	360	199	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	4	14	360	242	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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 27.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	4	13	331	183	40
Future Volume (Veh/h)	10	4	13	331	183	40
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)	11	4	14	360	199	43
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	608	220	242			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	608	220	242			
tC, single (s)	7.2	6.7	4.5			
tC, 2 stage (s)						
tF (s)	4.2	3.8	2.5			
p0 queue free %	97	99	99			
cM capacity (veh/h)	349	713	1140			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	11	4	14	360	242
Volume Left	11	0	14	0	0
Volume Right	0	4	0	0	43
cSH	349	713	1140	1700	1700
Volume to Capacity	0.03	0.01	0.01	0.21	0.14
Queue Length 95th (m)	0.7	0.1	0.3	0.0	0.0
Control Delay (s)	15.7	10.1	8.2	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	14.2		0.3		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

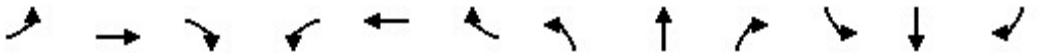
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	24	46	322	284	33
Future Volume (vph)	13	24	46	322	284	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1393	1350	1644	1671	1593	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1393	1350	1644	1671	1593	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	31%	21%	11%	15%	19%	18%
Adj. Flow (vph)	14	26	49	346	305	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	26	49	346	340	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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 33.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	24	46	322	284	33
Future Volume (Veh/h)	13	24	46	322	284	33
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	14	26	49	346	305	35
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	766	322	340			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	766	322	340			
tC, single (s)	6.7	6.4	4.2			
tC, 2 stage (s)						
tF (s)	3.8	3.5	2.3			
p0 queue free %	96	96	96			
cM capacity (veh/h)	318	677	1171			

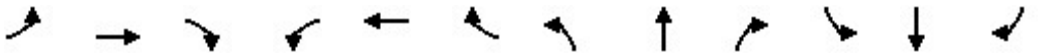
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	40	49	346	340
Volume Left	14	49	0	0
Volume Right	26	0	0	35
cSH	910	1171	1700	1700
Volume to Capacity	0.04	0.04	0.20	0.20
Queue Length 95th (m)	1.0	1.0	0.0	0.0
Control Delay (s)	12.7	8.2	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	12.7	1.0		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	33.6%	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	135	9	22	237	8	18	5	51	3	2	4
Future Volume (vph)	0	135	9	22	237	8	18	5	51	3	2	4
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		0.991			0.996			0.907			0.940	
Flt Protected					0.996			0.988			0.984	
Satd. Flow (prot)	0	1697	0	0	1794	0	0	1675	0	0	1777	0
Flt Permitted					0.996			0.988			0.984	
Satd. Flow (perm)	0	1697	0	0	1794	0	0	1675	0	0	1777	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	13%	0%	0%	7%	0%	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	0	144	10	23	252	9	19	5	54	3	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	284	0	0	78	0	0	9	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	

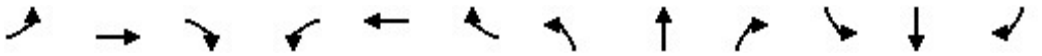
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	135	9	22	237	8	18	5	51	3	2	4
Future Volume (Veh/h)	0	135	9	22	237	8	18	5	51	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	144	10	23	252	9	19	5	54	3	2	4
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	261			154			456	456	149	508	456	256
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	261			154			456	456	149	508	456	256
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			96	99	94	99	100	99
cM capacity (veh/h)	1315			1439			507	496	892	441	495	787

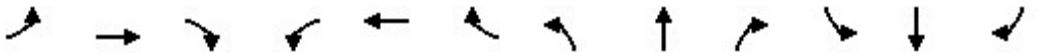
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	154	284	78	9
Volume Left	0	23	19	3
Volume Right	10	9	54	4
cSH	1315	1439	722	565
Volume to Capacity	0.00	0.02	0.11	0.02
Queue Length 95th (m)	0.0	0.4	2.8	0.4
Control Delay (s)	0.0	0.7	10.6	11.5
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.7	10.6	11.5
Approach LOS			B	B

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	37.1%	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)	13	792	5	4	957	14	11	10	4	7	13	0
Future Volume (vph)	13	792	5	4	957	14	11	10	4	7	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.980				
Flt Protected		0.999						0.978			0.984	
Satd. Flow (prot)	0	3458	1633	0	3518	0	0	1646	0	0	1589	0
Flt Permitted		0.999						0.978			0.984	
Satd. Flow (perm)	0	3458	1633	0	3518	0	0	1646	0	0	1589	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	92%	4%	0%	25%	3%	36%	0%	20%	25%	57%	0%	0%
Adj. Flow (vph)	14	843	5	4	1018	15	12	11	4	7	14	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	857	5	0	1037	0	0	27	0	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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	43.7%	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)	13	792	5	4	957	14	11	10	4	7	13	0
Future Volume (Veh/h)	13	792	5	4	957	14	11	10	4	7	13	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	14	843	5	4	1018	15	12	11	4	7	14	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	1033			848			1395	1912	422	1492	1910	516
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1033			848			1395	1912	422	1492	1910	516
tC, single (s)	5.9			4.6			7.5	6.9	7.4	8.6	6.5	6.9
tC, 2 stage (s)												
tF (s)	3.1			2.5			3.5	4.2	3.5	4.1	4.0	3.3
p0 queue free %	96			99			85	79	99	83	79	100
cM capacity (veh/h)	318			654			83	52	521	41	66	509

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	295	562	5	513	524	27	21
Volume Left	14	0	0	4	0	12	7
Volume Right	0	0	5	0	15	4	0
cSH	318	1700	1700	654	1700	74	55
Volume to Capacity	0.04	0.33	0.00	0.01	0.31	0.36	0.39
Queue Length 95th (m)	1.0	0.0	0.0	0.1	0.0	10.6	10.7
Control Delay (s)	1.6	0.0	0.0	0.2	0.0	79.0	107.5
Lane LOS	A			A		F	F
Approach Delay (s)	0.6			0.1		79.0	107.5
Approach LOS						F	F

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	43.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	37	323	2	21	332
Future Volume (vph)	1	37	323	2	21	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.868		0.999			
Flt Protected	0.999				0.950	
Satd. Flow (prot)	1112	0	1685	0	1534	1614
Flt Permitted	0.999				0.950	
Satd. Flow (perm)	1112	0	1685	0	1534	1614
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	51%	14%	0%	19%	19%
Adj. Flow (vph)	1	41	355	2	23	365
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	0	357	0	23	365
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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	97		14	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	37	323	2	21	332
Future Volume (Veh/h)	1	37	323	2	21	332
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	41	355	2	23	365
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	767	356			357	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	767	356			357	
tC, single (s)	6.4	6.7			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.8			2.4	
p0 queue free %	100	93			98	
cM capacity (veh/h)	366	591			1113	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	42	357	23	365
Volume Left	1	0	23	0
Volume Right	41	2	0	0
cSH	582	1700	1113	1700
Volume to Capacity	0.07	0.21	0.02	0.21
Queue Length 95th (m)	1.8	0.0	0.5	0.0
Control Delay (s)	11.7	0.0	8.3	0.0
Lane LOS	B		A	
Approach Delay (s)	11.7	0.0	0.5	
Approach LOS	B			

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

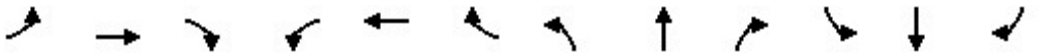
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	13	29	54	24	8
Future Volume (vph)	30	13	29	54	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960				0.966	
Flt Protected	0.966			0.983		
Satd. Flow (prot)	1506	0	0	1623	1485	0
Flt Permitted	0.966			0.983		
Satd. Flow (perm)	1506	0	0	1623	1485	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	13%	31%	34%	7%	25%	25%
Adj. Flow (vph)	38	16	36	68	30	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	0	104	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	13	29	54	24	8
Future Volume (Veh/h)	30	13	29	54	24	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	38	16	36	68	30	10
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	175	35	40			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	175	35	40			
tC, single (s)	6.5	6.5	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.6	2.5			
p0 queue free %	95	98	97			
cM capacity (veh/h)	770	961	1387			

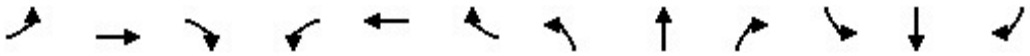
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	104	40
Volume Left	38	36	0
Volume Right	16	0	10
cSH	818	1387	1700
Volume to Capacity	0.07	0.03	0.02
Queue Length 95th (m)	1.6	0.6	0.0
Control Delay (s)	9.7	2.8	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	2.8	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	21.1%	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	1	6	13	6	31	6	36	14	6	1	0
Future Volume (vph)	0	1	6	13	6	31	6	36	14	6	1	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		0.880			0.916			0.966				
Flt Protected					0.987			0.994			0.957	
Satd. Flow (prot)	0	1522	0	0	1552	0	0	1610	0	0	1839	0
Flt Permitted					0.987			0.994			0.957	
Satd. Flow (perm)	0	1522	0	0	1552	0	0	1610	0	0	1839	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	100%	0%	31%	17%	3%	17%	0%	50%	0%	0%	0%
Adj. Flow (vph)	0	1	8	16	8	39	8	45	18	8	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	63	0	0	71	0	0	9	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	6	13	6	31	6	36	14	6	1	0
Future Volume (vph)	0	1	6	13	6	31	6	36	14	6	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	1	8	16	8	39	8	45	18	8	1	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	9	63	71	9
Volume Left (vph)	0	16	8	8
Volume Right (vph)	8	39	18	0
Hadj (s)	-0.34	-0.12	0.12	0.18
Departure Headway (s)	3.8	4.0	4.2	4.3
Degree Utilization, x	0.01	0.07	0.08	0.01
Capacity (veh/h)	920	885	837	816
Control Delay (s)	6.8	7.3	7.6	7.3
Approach Delay (s)	6.8	7.3	7.6	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	19.6%	ICU Level of Service	A	
Analysis Period (min)	15			

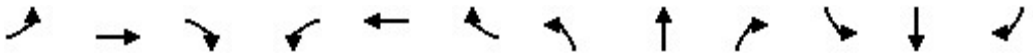
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	135	1	0	258	1	0
Future Volume (vph)	135	1	0	258	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1700	0	0	1830	1825	0
Flt Permitted					0.950	
Satd. Flow (perm)	1700	0	0	1830	1825	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	13%	0%	0%	5%	0%	0%
Adj. Flow (vph)	167	1	0	319	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	0	0	319	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	135	1	0	258	1	0
Future Volume (Veh/h)	135	1	0	258	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	167	1	0	319	1	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)	184					
pX, platoon unblocked						
vC, conflicting volume			168		486	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			168		486	168
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)			1422		544	882

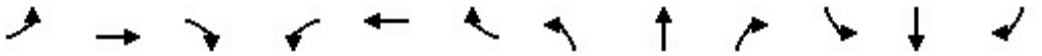
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	168	319	1
Volume Left	0	0	1
Volume Right	1	0	0
cSH	1700	1422	544
Volume to Capacity	0.10	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	11.6
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.6
Approach LOS			B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	23.6%	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	10	0	0	2	2	64	3	3	19	0
Future Volume (vph)	0	0	10	0	0	2	2	64	3	3	19	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		0.865			0.865			0.995				
Flt Protected								0.999			0.994	
Satd. Flow (prot)	0	1511	0	0	1662	0	0	1689	0	0	1492	0
Flt Permitted								0.999			0.994	
Satd. Flow (perm)	0	1511	0	0	1662	0	0	1689	0	0	1492	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	10%	0%	0%	0%	0%	14%	0%	0%	32%	0%
Adj. Flow (vph)	0	0	11	0	0	2	2	71	3	3	21	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	2	0	0	76	0	0	24	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	

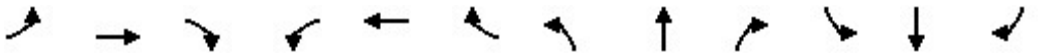
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	0	0	2	2	64	3	3	19	0
Future Volume (Veh/h)	0	0	10	0	0	2	2	64	3	3	19	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	11	0	0	2	2	71	3	3	21	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	106	105	21	114	104	72	21			74		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106	105	21	114	104	72	21			74		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	875	786	1034	856	788	995	1608			1538		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	2	76	24
Volume Left	0	0	2	3
Volume Right	11	2	3	0
cSH	1034	995	1608	1538
Volume to Capacity	0.01	0.00	0.00	0.00
Queue Length 95th (m)	0.2	0.0	0.0	0.0
Control Delay (s)	8.5	8.6	0.2	0.9
Lane LOS	A	A	A	A
Approach Delay (s)	8.5	8.6	0.2	0.9
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	13.9%	ICU Level of Service	A	
Analysis Period (min)	15			



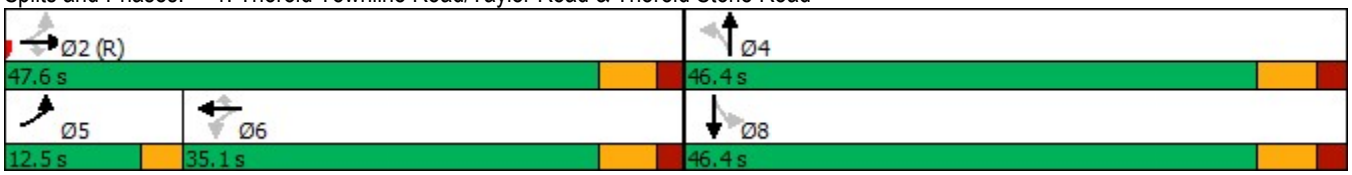
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	1160	48	36	896	33	57	89	20	51	165	254
Future Volume (vph)	241	1160	48	36	896	33	57	89	20	51	165	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.972			0.909	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1659	3579	1512	1825	3579	1201	1706	1701	0	1825	1611	0
Flt Permitted	0.172			0.236			0.213			0.684		
Satd. Flow (perm)	300	3579	1512	453	3579	1201	382	1701	0	1314	1611	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49			74		15			103	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	2%	8%	0%	2%	36%	7%	12%	0%	0%	9%	8%
Adj. Flow (vph)	248	1196	49	37	924	34	59	92	21	53	170	262
Shared Lane Traffic (%)												
Lane Group Flow (vph)	248	1196	49	37	924	34	59	113	0	53	432	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

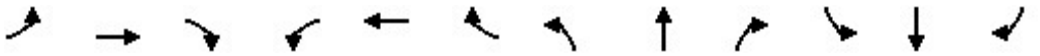
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	58.7	55.6	55.6	37.4	37.4	37.4	25.9	25.9		25.9	25.9	
Actuated g/C Ratio	0.62	0.59	0.59	0.40	0.40	0.40	0.28	0.28		0.28	0.28	
v/c Ratio	0.61	0.56	0.05	0.21	0.65	0.07	0.56	0.24		0.15	0.83	
Control Delay	18.3	14.6	4.0	26.7	27.6	1.0	47.5	21.6		23.4	37.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	18.3	14.6	4.0	26.7	27.6	1.0	47.5	21.6		23.4	37.7	
LOS	B	B	A	C	C	A	D	C		C	D	
Approach Delay		14.9			26.6			30.5			36.1	
Approach LOS		B			C			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 94
Actuated Cycle Length: 94
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 93.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	1160	48	36	896	33	57	89	20	51	165	254
Future Volume (vph)	241	1160	48	36	896	33	57	89	20	51	165	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1659	3579	1512	1825	3579	1201	1706	1701		1825	1611	
Flt Permitted	0.17	1.00	1.00	0.24	1.00	1.00	0.21	1.00		0.68	1.00	
Satd. Flow (perm)	301	3579	1512	453	3579	1201	383	1701		1314	1611	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	248	1196	49	37	924	34	59	92	21	53	170	262
RTOR Reduction (vph)	0	0	20	0	0	20	0	11	0	0	75	0
Lane Group Flow (vph)	248	1196	29	37	924	14	59	102	0	53	357	0
Heavy Vehicles (%)	10%	2%	8%	0%	2%	36%	7%	12%	0%	0%	9%	8%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	55.6	55.6	55.6	37.4	37.4	37.4	25.9	25.9		25.9	25.9	
Effective Green, g (s)	55.6	55.6	55.6	37.4	37.4	37.4	25.9	25.9		25.9	25.9	
Actuated g/C Ratio	0.59	0.59	0.59	0.40	0.40	0.40	0.28	0.28		0.28	0.28	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	397	2116	894	180	1423	477	105	468		362	443	
v/s Ratio Prot	c0.10	0.33			0.26			0.06			c0.22	
v/s Ratio Perm	c0.27		0.02	0.08		0.01	0.15			0.04		
v/c Ratio	0.62	0.57	0.03	0.21	0.65	0.03	0.56	0.22		0.15	0.81	
Uniform Delay, d1	12.4	11.8	8.0	18.6	23.0	17.2	29.2	26.2		25.7	31.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	1.1	0.1	1.6	1.7	0.1	4.9	0.1		0.1	9.9	
Delay (s)	15.0	12.9	8.1	20.2	24.7	17.3	34.1	26.4		25.8	41.6	
Level of Service	B	B	A	C	C	B	C	C		C	D	
Approach Delay (s)		13.1			24.2			29.0			39.9	
Approach LOS		B			C			C			D	

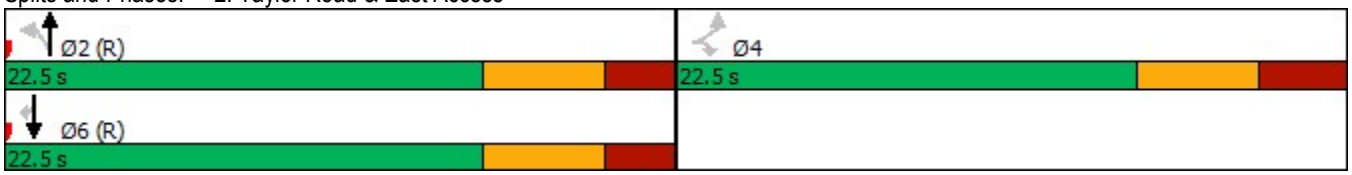
Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	21	5	326	456	13
Future Volume (vph)	16	21	5	326	456	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	971	837	913	1812	1847	816
Flt Permitted	0.950		0.491			
Satd. Flow (perm)	971	837	472	1812	1847	816
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		22				14
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	88%	95%	100%	6%	4%	100%
Adj. Flow (vph)	17	22	5	340	475	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	22	5	340	475	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	35.6	35.6	35.6	35.6
Actuated g/C Ratio	0.22	0.22	0.79	0.79	0.79	0.79
v/c Ratio	0.08	0.11	0.01	0.24	0.33	0.02
Control Delay	15.0	8.8	6.0	5.3	5.9	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	8.8	6.0	5.3	5.9	3.9
LOS	B	A	A	A	A	A
Approach Delay	11.5			5.3	5.8	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay: 5.9		Intersection LOS: A	
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	21	5	326	456	13
Future Volume (vph)	16	21	5	326	456	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	971	837	913	1812	1847	816
Flt Permitted	0.95	1.00	0.49	1.00	1.00	1.00
Satd. Flow (perm)	971	837	472	1812	1847	816
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	17	22	5	340	475	14
RTOR Reduction (vph)	0	20	0	0	0	5
Lane Group Flow (vph)	17	2	5	340	475	9
Heavy Vehicles (%)	88%	95%	100%	6%	4%	100%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	4.0	4.0	27.4	27.4	27.4	27.4
Effective Green, g (s)	4.0	4.0	27.4	27.4	27.4	27.4
Actuated g/C Ratio	0.09	0.09	0.61	0.61	0.61	0.61
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	86	74	287	1103	1124	496
v/s Ratio Prot				0.19	c0.26	
v/s Ratio Perm	c0.02	0.00	0.01			0.01
v/c Ratio	0.20	0.03	0.02	0.31	0.42	0.02
Uniform Delay, d1	19.0	18.7	3.5	4.2	4.6	3.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.2	0.1	0.7	1.2	0.1
Delay (s)	20.6	18.9	3.6	5.0	5.8	3.5
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.6			4.9	5.7	
Approach LOS	B			A	A	

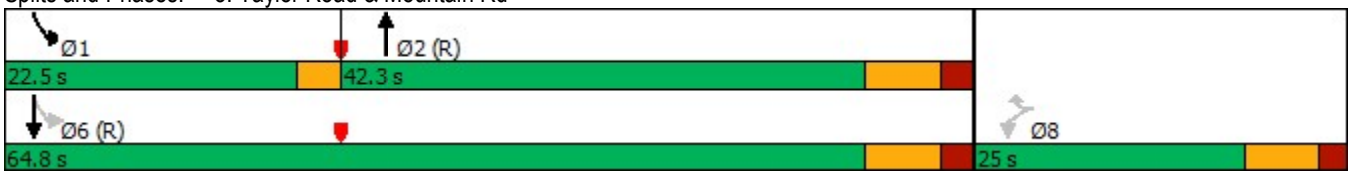
Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	127	67	200	139	114	341
Future Volume (vph)	127	67	200	139	114	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.945			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1706	1570	1670	0	1789	1812
Flt Permitted	0.950				0.497	
Satd. Flow (perm)	1706	1570	1670	0	936	1812
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		71	45			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	4%	5%	14%	2%	6%
Adj. Flow (vph)	134	71	211	146	120	359
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	71	357	0	120	359
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	12.4	12.4	51.9		67.4	63.1
Actuated g/C Ratio	0.14	0.14	0.58		0.75	0.70
v/c Ratio	0.57	0.26	0.36		0.15	0.28
Control Delay	45.4	10.8	10.5		3.9	6.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	45.4	10.8	10.5		3.9	6.0
LOS	D	B	B		A	A
Approach Delay	33.4		10.5			5.5
Approach LOS	C		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 49.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	127	67	200	139	114	341
Future Volume (vph)	127	67	200	139	114	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1706	1570	1670		1789	1812
Flt Permitted	0.95	1.00	1.00		0.50	1.00
Satd. Flow (perm)	1706	1570	1670		936	1812
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	134	71	211	146	120	359
RTOR Reduction (vph)	0	61	19	0	0	0
Lane Group Flow (vph)	134	10	338	0	120	359
Heavy Vehicles (%)	7%	4%	5%	14%	2%	6%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	12.4	12.4	51.9		63.1	63.1
Effective Green, g (s)	12.4	12.4	51.9		63.1	63.1
Actuated g/C Ratio	0.14	0.14	0.58		0.70	0.70
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	235	216	965		735	1273
v/s Ratio Prot			c0.20		0.01	c0.20
v/s Ratio Perm	c0.08	0.01			0.10	
v/c Ratio	0.57	0.05	0.35		0.16	0.28
Uniform Delay, d1	36.2	33.6	10.0		4.4	5.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.6	0.1	1.0		0.1	0.6
Delay (s)	38.8	33.6	11.0		4.5	5.5
Level of Service	D	C	B		A	A
Approach Delay (s)	37.0		11.0			5.3
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	40	16	4	263	448	10
Future Volume (vph)	40	16	4	263	448	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.997	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1259	1089	1043	1830	1837	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1259	1089	1043	1830	1837	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	45%	50%	75%	5%	3%	60%
Adj. Flow (vph)	43	17	4	283	482	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	17	4	283	493	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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 34.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	16	4	263	448	10
Future Volume (Veh/h)	40	16	4	263	448	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	17	4	283	482	11
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	778	488	493			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	778	488	493			
tC, single (s)	6.8	6.7	4.8			
tC, 2 stage (s)						
tF (s)	3.9	3.8	2.9			
p0 queue free %	86	97	99			
cM capacity (veh/h)	309	494	780			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	43	17	4	283	493
Volume Left	43	0	4	0	0
Volume Right	0	17	0	0	11
cSH	309	494	780	1700	1700
Volume to Capacity	0.14	0.03	0.01	0.17	0.29
Queue Length 95th (m)	3.6	0.8	0.1	0.0	0.0
Control Delay (s)	18.5	12.5	9.6	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	16.8		0.1		0.0
Approach LOS	C				

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

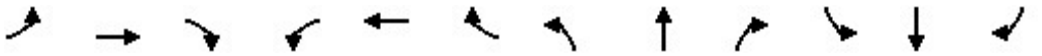
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	59	49	278	432	15
Future Volume (vph)	22	59	49	278	432	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.995	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1825	1633	1134	1812	1752	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1825	1633	1134	1812	1752	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	61%	6%	8%	40%
Adj. Flow (vph)	23	63	52	296	460	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	63	52	296	476	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	59	49	278	432	15
Future Volume (Veh/h)	22	59	49	278	432	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	23	63	52	296	460	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	868	468	476			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	868	468	476			
tC, single (s)	6.4	6.2	4.7			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.7			
p0 queue free %	92	89	94			
cM capacity (veh/h)	305	599	838			

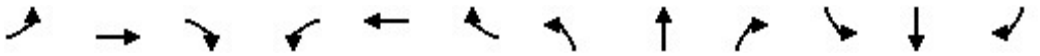
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	86	52	296	476
Volume Left	23	52	0	0
Volume Right	63	0	0	16
cSH	818	838	1700	1700
Volume to Capacity	0.11	0.06	0.17	0.28
Queue Length 95th (m)	2.7	1.5	0.0	0.0
Control Delay (s)	13.3	9.6	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	13.3	1.4		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	40.3%	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)	1	255	21	30	179	1	15	4	36	2	1	0
Future Volume (vph)	1	255	21	30	179	1	15	4	36	2	1	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		0.990			0.999			0.911				
Flt Protected					0.993			0.987			0.968	
Satd. Flow (prot)	0	1742	0	0	1843	0	0	1639	0	0	1395	0
Flt Permitted					0.993			0.987			0.968	
Satd. Flow (perm)	0	1742	0	0	1843	0	0	1639	0	0	1395	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
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%	10%	0%	0%	4%	0%	20%	0%	0%	50%	0%	0%
Adj. Flow (vph)	1	274	23	32	192	1	16	4	39	2	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	0	0	225	0	0	59	0	0	3	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	

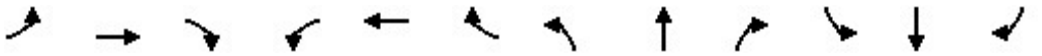
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	255	21	30	179	1	15	4	36	2	1	0
Future Volume (Veh/h)	1	255	21	30	179	1	15	4	36	2	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	1	274	23	32	192	1	16	4	39	2	1	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	193			297			544	544	286	585	556	192
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	193			297			544	544	286	585	556	192
tC, single (s)	4.1			4.1			7.3	6.5	6.2	7.6	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.7	4.0	3.3	4.0	4.0	3.3
p0 queue free %	100			97			96	99	95	99	100	100
cM capacity (veh/h)	1392			1276			414	437	758	332	431	854

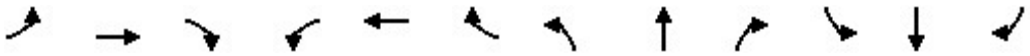
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	298	225	59	3
Volume Left	1	32	16	2
Volume Right	23	1	39	0
cSH	1392	1276	594	359
Volume to Capacity	0.00	0.03	0.10	0.01
Queue Length 95th (m)	0.0	0.6	2.5	0.2
Control Delay (s)	0.0	1.3	11.7	15.1
Lane LOS	A	A	B	C
Approach Delay (s)	0.0	1.3	11.7	15.1
Approach LOS			B	C

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	39.2%	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)	5	1194	13	1	964	14	9	14	2	5	22	0
Future Volume (vph)	5	1194	13	1	964	14	9	14	2	5	22	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.989				
Flt Protected								0.982			0.991	
Satd. Flow (prot)	0	3568	1633	0	3535	0	0	1866	0	0	1838	0
Flt Permitted								0.982			0.991	
Satd. Flow (perm)	0	3568	1633	0	3535	0	0	1866	0	0	1838	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	80%	2%	0%	0%	3%	7%	0%	0%	0%	20%	0%	0%
Adj. Flow (vph)	5	1231	13	1	994	14	9	14	2	5	23	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1236	13	0	1009	0	0	25	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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	46.5%	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)	5	1194	13	1	964	14	9	14	2	5	22	0
Future Volume (Veh/h)	5	1194	13	1	964	14	9	14	2	5	22	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	5	1231	13	1	994	14	9	14	2	5	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	1008			1244			1752	2251	616	1638	2257	504
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1008			1244			1752	2251	616	1638	2257	504
tC, single (s)	5.7			4.1			7.5	6.5	6.9	7.9	6.5	6.9
tC, 2 stage (s)												
tF (s)	3.0			2.2			3.5	4.0	3.3	3.7	4.0	3.3
p0 queue free %	99			100			71	66	100	88	44	100
cM capacity (veh/h)	360			567			31	41	439	40	41	518

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	415	821	13	498	511	25	28
Volume Left	5	0	0	1	0	9	5
Volume Right	0	0	13	0	14	2	0
cSH	360	1700	1700	567	1700	39	41
Volume to Capacity	0.01	0.48	0.01	0.00	0.30	0.64	0.68
Queue Length 95th (m)	0.3	0.0	0.0	0.0	0.0	17.4	19.2
Control Delay (s)	0.5	0.0	0.0	0.1	0.0	196.0	201.1
Lane LOS	A			A		F	F
Approach Delay (s)	0.2			0.0		196.0	201.1
Approach LOS						F	F

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	46.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	33	299	0	29	451
Future Volume (vph)	0	33	299	0	29	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1445	0	1812	0	1772	1746
Flt Permitted					0.950	
Satd. Flow (perm)	1445	0	1812	0	1772	1746
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	15%	6%	0%	3%	10%
Adj. Flow (vph)	0	35	315	0	31	475
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	315	0	31	475
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	33	299	0	29	451
Future Volume (Veh/h)	0	33	299	0	29	451
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	35	315	0	31	475
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	852	315			315	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	852	315			315	
tC, single (s)	6.4	6.4			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	95			97	
cM capacity (veh/h)	324	696			1240	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	35	315	31	475
Volume Left	0	0	31	0
Volume Right	35	0	0	0
cSH	696	1700	1240	1700
Volume to Capacity	0.05	0.19	0.03	0.28
Queue Length 95th (m)	1.2	0.0	0.6	0.0
Control Delay (s)	10.4	0.0	8.0	0.0
Lane LOS	B		A	
Approach Delay (s)	10.4	0.0	0.5	
Approach LOS	B			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	26	13	49	55	30
Future Volume (vph)	5	26	13	49	55	30
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	0.887				0.952	
Flt Protected	0.992			0.990		
Satd. Flow (prot)	1690	0	0	1193	1829	0
Flt Permitted	0.992			0.990		
Satd. Flow (perm)	1690	0	0	1193	1829	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	38%	65%	0%	0%
Adj. Flow (vph)	6	30	15	57	64	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	72	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

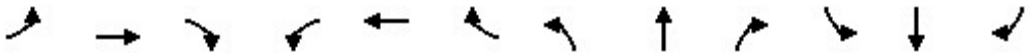
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	26	13	49	55	30
Future Volume (Veh/h)	5	26	13	49	55	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	6	30	15	57	64	35
Pedestrians						
Lane Width (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	168	82	99			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168	82	99			
tC, single (s)	6.4	6.2	4.5			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.5			
p0 queue free %	99	97	99			
cM capacity (veh/h)	817	984	1296			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	36	72	99
Volume Left	6	15	0
Volume Right	30	0	35
cSH	951	1296	1700
Volume to Capacity	0.04	0.01	0.06
Queue Length 95th (m)	0.9	0.3	0.0
Control Delay (s)	8.9	1.7	0.0
Lane LOS	A	A	
Approach Delay (s)	8.9	1.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.1		
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)	0	3	16	15	2	5	12	3	30	21	31	1
Future Volume (vph)	0	3	16	15	2	5	12	3	30	21	31	1
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		0.885			0.970			0.910			0.998	
Flt Protected					0.967			0.987			0.980	
Satd. Flow (prot)	0	1547	0	0	1802	0	0	1036	0	0	1879	0
Flt Permitted					0.967			0.987			0.980	
Satd. Flow (perm)	0	1547	0	0	1802	0	0	1036	0	0	1879	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	67%	0%	0%	0%	0%	17%	0%	93%	0%	0%	0%
Adj. Flow (vph)	0	4	23	21	3	7	17	4	42	30	44	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	31	0	0	63	0	0	75	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	3	16	15	2	5	12	3	30	21	31	1
Future Volume (vph)	0	3	16	15	2	5	12	3	30	21	31	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	4	23	21	3	7	17	4	42	30	44	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	27	31	63	75
Volume Left (vph)	0	21	17	30
Volume Right (vph)	23	7	42	1
Hadj (s)	-0.34	0.00	0.79	0.07
Departure Headway (s)	3.9	4.3	4.9	4.2
Degree Utilization, x	0.03	0.04	0.09	0.09
Capacity (veh/h)	881	815	717	846
Control Delay (s)	7.0	7.4	8.3	7.6
Approach Delay (s)	7.0	7.4	8.3	7.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	19.1%	ICU Level of Service	A	
Analysis Period (min)	15			

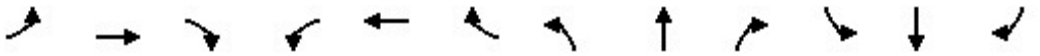
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	271	0	0	195	0	0
Future Volume (vph)	271	0	0	195	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1779	0	0	1812	1921	0
Flt Permitted						
Satd. Flow (perm)	1779	0	0	1812	1921	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	0%	0%	6%	0%	0%
Adj. Flow (vph)	285	0	0	205	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	285	0	0	205	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	271	0	0	195	0	0
Future Volume (Veh/h)	271	0	0	195	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	285	0	0	205	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)	184					
pX, platoon unblocked						
vC, conflicting volume			285		490	285
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			285		490	285
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)			1289		541	759

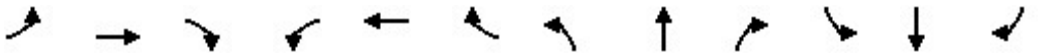
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	285	205	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1289	1700
Volume to Capacity	0.17	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		17.6%	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	3	3	0	1	1	48	0	0	66	0
Future Volume (vph)	0	0	3	3	0	1	1	48	0	0	66	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		0.865			0.973							
Flt Protected					0.962			0.999				
Satd. Flow (prot)	0	1662	0	0	1798	0	0	1171	0	0	1921	0
Flt Permitted					0.962			0.999				
Satd. Flow (perm)	0	1662	0	0	1798	0	0	1171	0	0	1921	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	65%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	4	4	0	1	1	60	0	0	83	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	5	0	0	61	0	0	83	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 13.5%		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	3	3	0	1	1	48	0	0	66	0
Future Volume (Veh/h)	0	0	3	3	0	1	1	48	0	0	66	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	4	4	0	1	1	60	0	0	82	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	145	144	82	148	144	60	82			60		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	145	144	82	148	144	60	82			60		
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)	827	750	983	821	750	1011	1528			1556		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	5	61	82
Volume Left	0	4	1	0
Volume Right	4	1	0	0
cSH	983	853	1528	1556
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length 95th (m)	0.1	0.1	0.0	0.0
Control Delay (s)	8.7	9.2	0.1	0.0
Lane LOS	A	A	A	
Approach Delay (s)	8.7	9.2	0.1	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	13.5%	ICU Level of Service	A	
Analysis Period (min)	15			

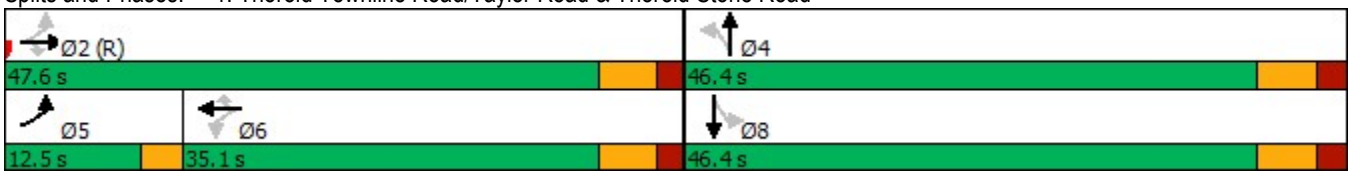
Appendix A Subsection – Future Total Horizon 2: 2034 Volumes (AM & PM)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	779	34	19	953	38	26	122	33	26	73	209
Future Volume (vph)	273	779	34	19	953	38	26	122	33	26	73	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.968			0.889	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1587	3510	1498	1825	3544	1633	1755	1669	0	1534	1466	0
Flt Permitted	0.140			0.334			0.263			0.575		
Satd. Flow (perm)	234	3510	1498	642	3544	1633	486	1669	0	928	1466	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39			74		18			192	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
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
Heavy Vehicles (%)	15%	4%	9%	0%	3%	0%	4%	8%	24%	19%	18%	16%
Adj. Flow (vph)	297	847	37	21	1036	41	28	133	36	28	79	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	297	847	37	21	1036	41	28	169	0	28	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	69.4	66.3	66.3	39.1	39.1	39.1	15.2	15.2		15.2	15.2	
Actuated g/C Ratio	0.74	0.71	0.71	0.42	0.42	0.42	0.16	0.16		0.16	0.16	
v/c Ratio	0.57	0.34	0.03	0.08	0.70	0.06	0.36	0.60		0.19	0.77	
Control Delay	16.6	6.5	2.2	19.8	26.9	2.0	45.5	40.2		34.2	27.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.6	6.5	2.2	19.8	26.9	2.0	45.5	40.2		34.2	27.1	
LOS	B	A	A	B	C	A	D	D		C	C	
Approach Delay		8.9			25.9			41.0			27.7	
Approach LOS		A			C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 20.0		Intersection LOS: C	
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	779	34	19	953	38	26	122	33	26	73	209
Future Volume (vph)	273	779	34	19	953	38	26	122	33	26	73	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3510	1498	1825	3544	1633	1755	1669		1534	1465	
Flt Permitted	0.14	1.00	1.00	0.33	1.00	1.00	0.26	1.00		0.57	1.00	
Satd. Flow (perm)	234	3510	1498	641	3544	1633	486	1669		928	1465	
Peak-hour factor, PHF	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)	297	847	37	21	1036	41	28	133	36	28	79	227
RTOR Reduction (vph)	0	0	11	0	0	24	0	15	0	0	161	0
Lane Group Flow (vph)	297	847	26	21	1036	17	28	154	0	28	145	0
Heavy Vehicles (%)	15%	4%	9%	0%	3%	0%	4%	8%	24%	19%	18%	16%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	66.3	66.3	66.3	39.1	39.1	39.1	15.2	15.2		15.2	15.2	
Effective Green, g (s)	66.3	66.3	66.3	39.1	39.1	39.1	15.2	15.2		15.2	15.2	
Actuated g/C Ratio	0.71	0.71	0.71	0.42	0.42	0.42	0.16	0.16		0.16	0.16	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	513	2475	1056	266	1474	679	78	269		150	236	
v/s Ratio Prot	c0.15	0.24			c0.29			0.09			c0.10	
v/s Ratio Perm	0.26		0.02	0.03		0.01	0.06			0.03		
v/c Ratio	0.58	0.34	0.02	0.08	0.70	0.03	0.36	0.57		0.19	0.61	
Uniform Delay, d1	14.0	5.4	4.2	16.6	22.7	16.2	35.1	36.4		34.1	36.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.4	0.0	0.4	2.3	0.0	1.6	2.2		0.4	3.7	
Delay (s)	15.3	5.8	4.2	16.9	24.9	16.2	36.7	38.6		34.4	40.4	
Level of Service	B	A	A	B	C	B	D	D		C	D	
Approach Delay (s)		8.1			24.5			38.3			39.9	
Approach LOS		A			C			D			D	

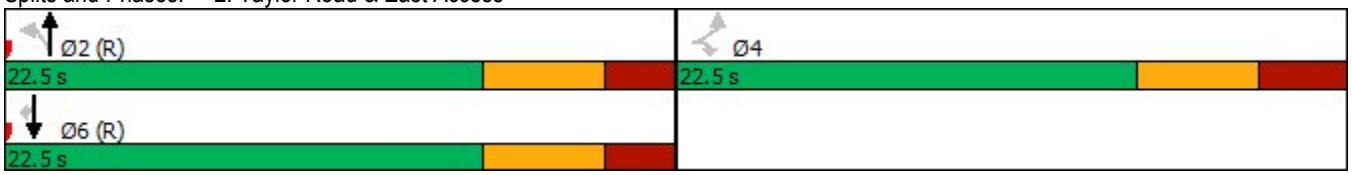
Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	29	29	343	317	15
Future Volume (vph)	15	29	29	343	317	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	913	816	913	1812	1830	944
Flt Permitted	0.950		0.544			
Satd. Flow (perm)	913	816	523	1812	1830	944
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		33				17
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	100%	100%	100%	6%	5%	73%
Adj. Flow (vph)	17	33	33	394	364	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	33	33	394	364	17
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	35.6	35.6	35.6	35.6
Actuated g/C Ratio	0.22	0.22	0.79	0.79	0.79	0.79
v/c Ratio	0.08	0.16	0.08	0.28	0.25	0.02
Control Delay	15.3	8.6	6.3	5.5	5.4	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	8.6	6.3	5.5	5.4	3.7
LOS	B	A	A	A	A	A
Approach Delay	10.9			5.6	5.3	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay: 5.8		Intersection LOS: A	
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	29	29	343	317	15
Future Volume (vph)	15	29	29	343	317	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	913	816	913	1812	1830	944
Flt Permitted	0.95	1.00	0.54	1.00	1.00	1.00
Satd. Flow (perm)	913	816	523	1812	1830	944
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	17	33	33	394	364	17
RTOR Reduction (vph)	0	30	0	0	0	7
Lane Group Flow (vph)	17	3	33	394	364	10
Heavy Vehicles (%)	100%	100%	100%	6%	5%	73%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	4.0	4.0	27.4	27.4	27.4	27.4
Effective Green, g (s)	4.0	4.0	27.4	27.4	27.4	27.4
Actuated g/C Ratio	0.09	0.09	0.61	0.61	0.61	0.61
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	81	72	318	1103	1114	574
v/s Ratio Prot				c0.22	0.20	
v/s Ratio Perm	c0.02	0.00	0.06			0.01
v/c Ratio	0.21	0.04	0.10	0.36	0.33	0.02
Uniform Delay, d1	19.0	18.7	3.7	4.4	4.3	3.5
Progression Factor	1.01	1.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.3	0.7	0.9	0.8	0.1
Delay (s)	21.0	19.3	4.3	5.3	5.1	3.5
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.9			5.2	5.0	
Approach LOS	B			A	A	

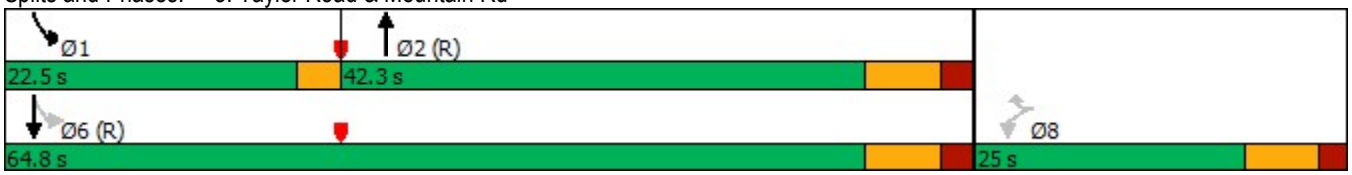
Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

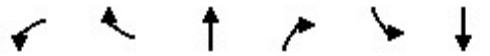
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	185	87	266	85	38	146
Future Volume (vph)	185	87	266	85	38	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.967			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1722	1585	1655	0	1738	1685
Flt Permitted	0.950				0.464	
Satd. Flow (perm)	1722	1585	1655	0	849	1685
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		100	21			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	6%	3%	12%	13%	5%	14%
Adj. Flow (vph)	213	100	306	98	44	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	213	100	404	0	44	168
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	15.0	15.0	53.9		64.8	60.5
Actuated g/C Ratio	0.17	0.17	0.60		0.72	0.67
v/c Ratio	0.74	0.29	0.40		0.06	0.15
Control Delay	51.1	8.9	12.2		4.4	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	51.1	8.9	12.2		4.4	6.2
LOS	D	A	B		A	A
Approach Delay	37.6		12.2			5.9
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	185	87	266	85	38	146
Future Volume (vph)	185	87	266	85	38	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1722	1585	1656		1738	1685
Flt Permitted	0.95	1.00	1.00		0.46	1.00
Satd. Flow (perm)	1722	1585	1656		849	1685
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	213	100	306	98	44	168
RTOR Reduction (vph)	0	83	9	0	0	0
Lane Group Flow (vph)	213	17	395	0	44	168
Heavy Vehicles (%)	6%	3%	12%	13%	5%	14%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	15.0	15.0	52.7		60.5	60.5
Effective Green, g (s)	15.0	15.0	52.7		60.5	60.5
Actuated g/C Ratio	0.17	0.17	0.59		0.67	0.67
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	287	264	971		619	1135
v/s Ratio Prot			c0.24		0.00	c0.10
v/s Ratio Perm	c0.12	0.01			0.04	
v/c Ratio	0.74	0.06	0.41		0.07	0.15
Uniform Delay, d1	35.6	31.5	10.1		5.1	5.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.3	0.1	1.3		0.0	0.3
Delay (s)	44.8	31.6	11.3		5.2	5.6
Level of Service	D	C	B		A	A
Approach Delay (s)	40.6		11.3			5.5
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	8	3	10	342	187	40
Future Volume (vph)	8	3	10	342	187	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.976	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1043	1228	1521	1746	1671	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1043	1228	1521	1746	1671	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	75%	33%	20%	10%	11%	18%
Adj. Flow (vph)	9	3	11	372	203	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	3	11	372	246	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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 28.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	3	10	342	187	40
Future Volume (Veh/h)	8	3	10	342	187	40
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)	9	3	11	372	203	43
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	618	224	246			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	618	224	246			
tC, single (s)	7.1	6.5	4.3			
tC, 2 stage (s)						
tF (s)	4.2	3.6	2.4			
p0 queue free %	97	100	99			
cM capacity (veh/h)	351	744	1222			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	9	3	11	372	246
Volume Left	9	0	11	0	0
Volume Right	0	3	0	0	43
cSH	351	744	1222	1700	1700
Volume to Capacity	0.03	0.00	0.01	0.22	0.14
Queue Length 95th (m)	0.6	0.1	0.2	0.0	0.0
Control Delay (s)	15.5	9.9	8.0	0.0	0.0
Lane LOS	C	A	A		
Approach Delay (s)	14.1		0.2		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

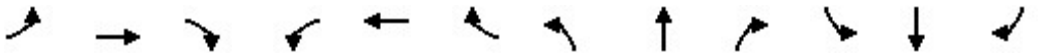
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	23	47	329	293	32
Future Volume (vph)	13	23	47	329	293	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1393	1396	1615	1685	1597	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1393	1396	1615	1685	1597	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	31%	17%	13%	14%	19%	16%
Adj. Flow (vph)	14	25	51	354	315	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	25	51	354	349	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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 34.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	23	47	329	293	32
Future Volume (Veh/h)	13	23	47	329	293	32
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	14	25	51	354	315	34
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	788	332	349			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	788	332	349			
tC, single (s)	6.7	6.4	4.2			
tC, 2 stage (s)						
tF (s)	3.8	3.5	2.3			
p0 queue free %	95	96	96			
cM capacity (veh/h)	308	677	1151			

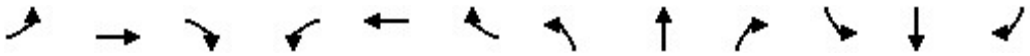
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	39	51	354	349
Volume Left	14	51	0	0
Volume Right	25	0	0	34
cSH	858	1151	1700	1700
Volume to Capacity	0.05	0.04	0.21	0.21
Queue Length 95th (m)	1.1	1.1	0.0	0.0
Control Delay (s)	12.9	8.3	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	12.9	1.0		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	34.0%	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	138	9	22	244	8	18	5	51	3	2	4
Future Volume (vph)	0	138	9	22	244	8	18	5	51	3	2	4
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		0.991			0.996			0.907			0.940	
Flt Protected					0.996			0.988			0.984	
Satd. Flow (prot)	0	1712	0	0	1794	0	0	1675	0	0	1777	0
Flt Permitted					0.996			0.988			0.984	
Satd. Flow (perm)	0	1712	0	0	1794	0	0	1675	0	0	1777	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	12%	0%	0%	7%	0%	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	0	147	10	23	260	9	19	5	54	3	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	0	0	292	0	0	78	0	0	9	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	

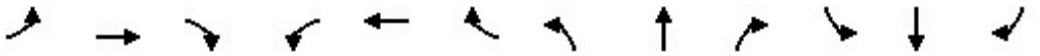
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	138	9	22	244	8	18	5	51	3	2	4
Future Volume (Veh/h)	0	138	9	22	244	8	18	5	51	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	147	10	23	260	9	19	5	54	3	2	4
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	269			157			468	467	152	519	468	264
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	269			157			468	467	152	519	468	264
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			96	99	94	99	100	99
cM capacity (veh/h)	1306			1435			499	488	889	433	488	779

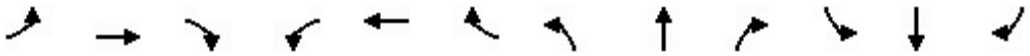
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	157	292	78	9
Volume Left	0	23	19	3
Volume Right	10	9	54	4
cSH	1306	1435	715	557
Volume to Capacity	0.00	0.02	0.11	0.02
Queue Length 95th (m)	0.0	0.4	2.8	0.4
Control Delay (s)	0.0	0.7	10.6	11.6
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.7	10.6	11.6
Approach LOS			B	B

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	37.6%	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)	13	841	5	4	1015	13	11	10	4	7	13	0
Future Volume (vph)	13	841	5	4	1015	13	11	10	4	7	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.980				
Flt Protected		0.999						0.978			0.984	
Satd. Flow (prot)	0	3461	1633	0	3522	0	0	1646	0	0	1589	0
Flt Permitted		0.999						0.978			0.984	
Satd. Flow (perm)	0	3461	1633	0	3522	0	0	1646	0	0	1589	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	92%	4%	0%	25%	3%	31%	0%	20%	25%	57%	0%	0%
Adj. Flow (vph)	14	895	5	4	1080	14	12	11	4	7	14	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	909	5	0	1098	0	0	27	0	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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	

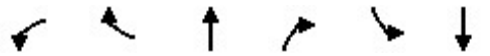
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	841	5	4	1015	13	11	10	4	7	13	0
Future Volume (Veh/h)	13	841	5	4	1015	13	11	10	4	7	13	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	14	895	5	4	1080	14	12	11	4	7	14	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	1094			900			1478	2025	448	1580	2023	547
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1094			900			1478	2025	448	1580	2023	547
tC, single (s)	5.9			4.6			7.5	6.9	7.4	8.6	6.5	6.9
tC, 2 stage (s)												
tF (s)	3.1			2.5			3.5	4.2	3.5	4.1	4.0	3.3
p0 queue free %	95			99			83	75	99	79	75	100
cM capacity (veh/h)	294			622			69	44	500	33	55	486

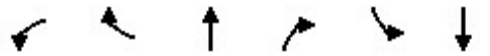
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	312	597	5	544	554	27	21
Volume Left	14	0	0	4	0	12	7
Volume Right	0	0	5	0	14	4	0
cSH	294	1700	1700	622	1700	62	45
Volume to Capacity	0.05	0.35	0.00	0.01	0.33	0.43	0.47
Queue Length 95th (m)	1.1	0.0	0.0	0.1	0.0	12.7	12.8
Control Delay (s)	1.8	0.0	0.0	0.2	0.0	101.4	141.1
Lane LOS	A			A		F	F
Approach Delay (s)	0.6			0.1		101.4	141.1
Approach LOS						F	F

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	45.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	36	331	2	21	342
Future Volume (vph)	1	36	331	2	21	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.868		0.999			
Flt Protected	0.999				0.950	
Satd. Flow (prot)	1120	0	1699	0	1534	1614
Flt Permitted	0.999				0.950	
Satd. Flow (perm)	1120	0	1699	0	1534	1614
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	50%	13%	0%	19%	19%
Adj. Flow (vph)	1	40	364	2	23	376
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	366	0	23	376
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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	97		14	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	36	331	2	21	342
Future Volume (Veh/h)	1	36	331	2	21	342
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	40	364	2	23	376
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	787	365			366	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	787	365			366	
tC, single (s)	6.4	6.7			4.3	
tC, 2 stage (s)						
tF (s)	3.5	3.8			2.4	
p0 queue free %	100	93			98	
cM capacity (veh/h)	356	585			1105	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	41	366	23	376
Volume Left	1	0	23	0
Volume Right	40	2	0	0
cSH	576	1700	1105	1700
Volume to Capacity	0.07	0.22	0.02	0.22
Queue Length 95th (m)	1.7	0.0	0.5	0.0
Control Delay (s)	11.7	0.0	8.3	0.0
Lane LOS	B		A	
Approach Delay (s)	11.7	0.0	0.5	
Approach LOS	B			

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

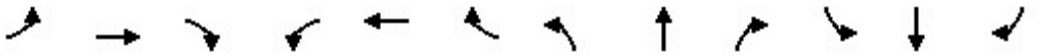
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	13	28	55	23	8
Future Volume (vph)	30	13	28	55	23	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.960				0.965	
Flt Protected	0.966			0.983		
Satd. Flow (prot)	1506	0	0	1618	1510	0
Flt Permitted	0.966			0.983		
Satd. Flow (perm)	1506	0	0	1618	1510	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	13%	31%	32%	9%	22%	25%
Adj. Flow (vph)	38	16	35	69	29	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	0	104	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	13	28	55	23	8
Future Volume (Veh/h)	30	13	28	55	23	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	38	16	35	69	29	10
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	173	34	39			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	173	34	39			
tC, single (s)	6.5	6.5	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.6	2.5			
p0 queue free %	95	98	97			
cM capacity (veh/h)	772	962	1398			

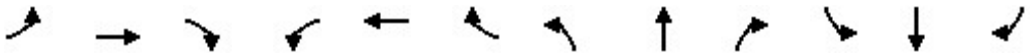
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	104	39
Volume Left	38	35	0
Volume Right	16	0	10
cSH	820	1398	1700
Volume to Capacity	0.07	0.03	0.02
Queue Length 95th (m)	1.6	0.6	0.0
Control Delay (s)	9.7	2.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	2.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	21.1%	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	1	6	12	6	31	6	36	15	6	1	0
Future Volume (vph)	0	1	6	12	6	31	6	36	15	6	1	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		0.880			0.915			0.964				
Flt Protected					0.988			0.994			0.957	
Satd. Flow (prot)	0	1522	0	0	1577	0	0	1589	0	0	1839	0
Flt Permitted					0.988			0.994			0.957	
Satd. Flow (perm)	0	1522	0	0	1577	0	0	1589	0	0	1839	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	100%	0%	25%	17%	3%	17%	0%	53%	0%	0%	0%
Adj. Flow (vph)	0	1	8	15	8	39	8	45	19	8	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	62	0	0	72	0	0	9	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	6	12	6	31	6	36	15	6	1	0
Future Volume (vph)	0	1	6	12	6	31	6	36	15	6	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	1	8	15	8	39	8	45	19	8	1	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	9	62	72	9
Volume Left (vph)	0	15	8	8
Volume Right (vph)	8	39	19	0
Hadj (s)	-0.34	-0.16	0.13	0.18
Departure Headway (s)	3.8	3.9	4.2	4.3
Degree Utilization, x	0.01	0.07	0.08	0.01
Capacity (veh/h)	920	893	835	817
Control Delay (s)	6.8	7.2	7.6	7.3
Approach Delay (s)	6.8	7.2	7.6	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.4			
Level of Service	A			
Intersection Capacity Utilization	19.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	138	1	0	266	1	0
Future Volume (vph)	138	1	0	266	1	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	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1715	0	0	1830	1825	0
Flt Permitted					0.950	
Satd. Flow (perm)	1715	0	0	1830	1825	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	12%	0%	0%	5%	0%	0%
Adj. Flow (vph)	170	1	0	328	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	328	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

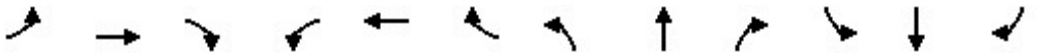
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	138	1	0	266	1	0
Future Volume (Veh/h)	138	1	0	266	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	170	1	0	328	1	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)	184					
pX, platoon unblocked						
vC, conflicting volume			171		498	170
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			171		498	170
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)			1418		535	879

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	171	328	1
Volume Left	0	0	1
Volume Right	1	0	0
cSH	1700	1418	535
Volume to Capacity	0.10	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	11.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.7
Approach LOS			B

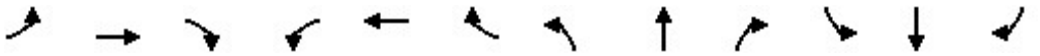
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Access



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	0	0	2	2	65	3	3	18	0
Future Volume (vph)	0	0	10	0	0	2	2	65	3	3	18	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		0.865			0.865			0.995				
Flt Protected								0.999			0.994	
Satd. Flow (prot)	0	1511	0	0	1662	0	0	1675	0	0	1536	0
Flt Permitted								0.999			0.994	
Satd. Flow (perm)	0	1511	0	0	1662	0	0	1675	0	0	1536	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	10%	0%	0%	0%	0%	15%	0%	0%	28%	0%
Adj. Flow (vph)	0	0	11	0	0	2	2	72	3	3	20	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	2	0	0	77	0	0	23	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 13.9%		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	0	10	0	0	2	2	65	3	3	18	0
Future Volume (Veh/h)	0	0	10	0	0	2	2	65	3	3	18	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	11	0	0	2	2	72	3	3	20	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	106	105	20	114	104	74	20			75		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106	105	20	114	104	74	20			75		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	875	786	1035	856	788	994	1609			1537		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	2	77	23
Volume Left	0	0	2	3
Volume Right	11	2	3	0
cSH	1035	994	1609	1537
Volume to Capacity	0.01	0.00	0.00	0.00
Queue Length 95th (m)	0.2	0.0	0.0	0.0
Control Delay (s)	8.5	8.6	0.2	1.0
Lane LOS	A	A	A	A
Approach Delay (s)	8.5	8.6	0.2	1.0
Approach LOS	A	A		

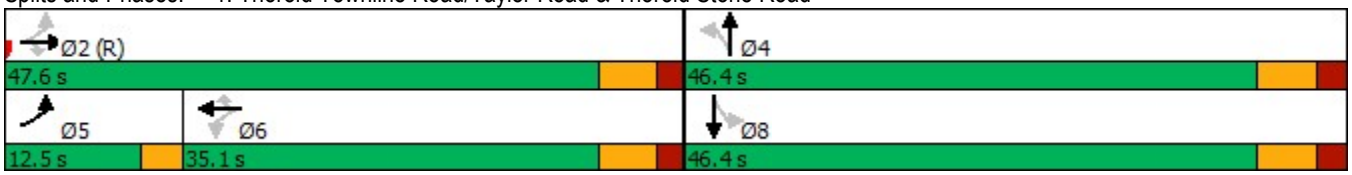
Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	13.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1229	48	36	951	33	57	92	20	51	169	254
Future Volume (vph)	242	1229	48	36	951	33	57	92	20	51	169	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.973			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1587	3544	1512	1825	3544	1286	1755	1638	0	1521	1531	0
Flt Permitted	0.133			0.219			0.233			0.682		
Satd. Flow (perm)	222	3544	1512	421	3544	1286	430	1638	0	1092	1531	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49			74		15			100	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	15%	3%	8%	0%	3%	27%	4%	15%	10%	20%	16%	13%
Adj. Flow (vph)	249	1267	49	37	980	34	59	95	21	53	174	262
Shared Lane Traffic (%)												
Lane Group Flow (vph)	249	1267	49	37	980	34	59	116	0	53	436	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	57.2	54.1	54.1	34.9	34.9	34.9	27.4	27.4		27.4	27.4	
Actuated g/C Ratio	0.61	0.58	0.58	0.37	0.37	0.37	0.29	0.29		0.29	0.29	
v/c Ratio	0.67	0.62	0.06	0.24	0.74	0.06	0.47	0.24		0.17	0.84	
Control Delay	26.8	16.6	4.3	28.9	31.6	1.0	37.4	20.8		22.7	38.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	26.8	16.6	4.3	28.9	31.6	1.0	37.4	20.8		22.7	38.2	
LOS	C	B	A	C	C	A	D	C		C	D	
Approach Delay		17.8			30.5			26.4			36.5	
Approach LOS		B			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 25.1		Intersection LOS: C	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	1229	48	36	951	33	57	92	20	51	169	254
Future Volume (vph)	242	1229	48	36	951	33	57	92	20	51	169	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1587	3544	1512	1825	3544	1286	1755	1638		1521	1531	
Flt Permitted	0.13	1.00	1.00	0.22	1.00	1.00	0.23	1.00		0.68	1.00	
Satd. Flow (perm)	222	3544	1512	422	3544	1286	430	1638		1092	1531	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	249	1267	49	37	980	34	59	95	21	53	174	262
RTOR Reduction (vph)	0	0	21	0	0	21	0	11	0	0	71	0
Lane Group Flow (vph)	249	1267	28	37	980	13	59	105	0	53	365	0
Heavy Vehicles (%)	15%	3%	8%	0%	3%	27%	4%	15%	10%	20%	16%	13%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	54.1	54.1	54.1	34.9	34.9	34.9	27.4	27.4		27.4	27.4	
Effective Green, g (s)	54.1	54.1	54.1	34.9	34.9	34.9	27.4	27.4		27.4	27.4	
Actuated g/C Ratio	0.58	0.58	0.58	0.37	0.37	0.37	0.29	0.29		0.29	0.29	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	363	2039	870	156	1315	477	125	477		318	446	
v/s Ratio Prot	c0.12	0.36			c0.28			0.06			c0.24	
v/s Ratio Perm	0.28		0.02	0.09		0.01	0.14			0.05		
v/c Ratio	0.69	0.62	0.03	0.24	0.75	0.03	0.47	0.22		0.17	0.82	
Uniform Delay, d1	16.6	13.2	8.6	20.4	25.7	18.8	27.4	25.2		24.8	31.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	1.4	0.1	2.2	3.1	0.1	1.6	0.1		0.1	10.8	
Delay (s)	21.5	14.6	8.7	22.6	28.8	18.8	29.0	25.4		24.9	41.8	
Level of Service	C	B	A	C	C	B	C	C		C	D	
Approach Delay (s)		15.5			28.3			26.6			40.0	
Approach LOS		B			C			C			D	

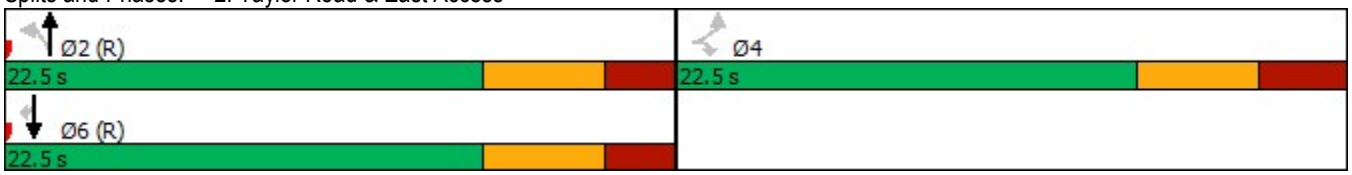
Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	20	5	334	469	16
Future Volume (vph)	15	20	5	334	469	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	913	816	913	1812	1812	816
Flt Permitted	0.950		0.484			
Satd. Flow (perm)	913	816	465	1812	1812	816
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		21				17
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	100%	100%	100%	6%	6%	100%
Adj. Flow (vph)	16	21	5	348	489	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	21	5	348	489	17
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	35.6	35.6	35.6	35.6
Actuated g/C Ratio	0.22	0.22	0.79	0.79	0.79	0.79
v/c Ratio	0.08	0.11	0.01	0.24	0.34	0.03
Control Delay	15.1	8.9	6.0	5.3	6.1	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.1	8.9	6.0	5.3	6.1	3.8
LOS	B	A	A	A	A	A
Approach Delay	11.6			5.3	6.0	
Approach LOS	B			A	A	

Intersection Summary	
Area Type:	Other
Cycle Length: 45	
Actuated Cycle Length: 45	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 44.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Taylor Road & East Access



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	20	5	334	469	16
Future Volume (vph)	15	20	5	334	469	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	913	816	913	1812	1812	816
Flt Permitted	0.95	1.00	0.48	1.00	1.00	1.00
Satd. Flow (perm)	913	816	465	1812	1812	816
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	21	5	348	489	17
RTOR Reduction (vph)	0	19	0	0	0	7
Lane Group Flow (vph)	16	2	5	348	489	10
Heavy Vehicles (%)	100%	100%	100%	6%	6%	100%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	4.0	4.0	27.4	27.4	27.4	27.4
Effective Green, g (s)	4.0	4.0	27.4	27.4	27.4	27.4
Actuated g/C Ratio	0.09	0.09	0.61	0.61	0.61	0.61
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	81	72	283	1103	1103	496
v/s Ratio Prot				0.19	c0.27	
v/s Ratio Perm	c0.02	0.00	0.01			0.01
v/c Ratio	0.20	0.03	0.02	0.32	0.44	0.02
Uniform Delay, d1	19.0	18.7	3.5	4.3	4.7	3.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.2	0.1	0.8	1.3	0.1
Delay (s)	20.6	18.9	3.6	5.0	6.0	3.6
Level of Service	C	B	A	A	A	A
Approach Delay (s)	19.7			5.0	5.9	
Approach LOS	B			A	A	

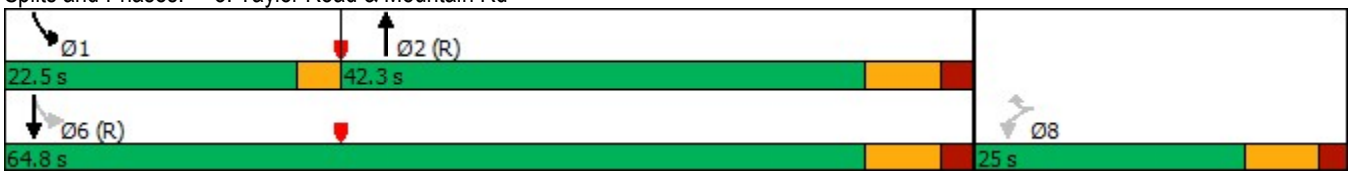
Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

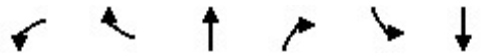
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	69	206	138	114	353
Future Volume (vph)	131	69	206	138	114	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.946			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1674	1570	1631	0	1722	1671
Flt Permitted	0.950				0.492	
Satd. Flow (perm)	1674	1570	1631	0	892	1671
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		73	44			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	9%	4%	9%	15%	6%	15%
Adj. Flow (vph)	138	73	217	145	120	372
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	73	362	0	120	372
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	12.7	12.7	51.6		67.1	62.8
Actuated g/C Ratio	0.14	0.14	0.57		0.75	0.70
v/c Ratio	0.59	0.26	0.38		0.16	0.32
Control Delay	46.0	10.5	11.0		4.0	6.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	46.0	10.5	11.0		4.0	6.5
LOS	D	B	B		A	A
Approach Delay	33.7		11.0			5.9
Approach LOS	C		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 13.1		Intersection LOS: B	
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	69	206	138	114	353
Future Volume (vph)	131	69	206	138	114	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1674	1570	1631		1722	1671
Flt Permitted	0.95	1.00	1.00		0.49	1.00
Satd. Flow (perm)	1674	1570	1631		892	1671
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	73	217	145	120	372
RTOR Reduction (vph)	0	63	19	0	0	0
Lane Group Flow (vph)	138	10	343	0	120	372
Heavy Vehicles (%)	9%	4%	9%	15%	6%	15%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	12.7	12.7	51.6		62.8	62.8
Effective Green, g (s)	12.7	12.7	51.6		62.8	62.8
Actuated g/C Ratio	0.14	0.14	0.57		0.70	0.70
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	236	222	937		699	1168
v/s Ratio Prot			c0.21		0.02	c0.22
v/s Ratio Perm	c0.08	0.01			0.10	
v/c Ratio	0.58	0.05	0.37		0.17	0.32
Uniform Delay, d1	36.1	33.3	10.3		4.5	5.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.9	0.1	1.1		0.1	0.7
Delay (s)	39.0	33.4	11.4		4.6	5.9
Level of Service	D	C	B		A	A
Approach Delay (s)	37.0		11.4			5.6
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	40	16	2	270	464	6
Future Volume (vph)	40	16	2	270	464	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.998	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1086	1047	1825	1779	1729	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1086	1047	1825	1779	1729	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	68%	56%	0%	8%	11%	0%
Adj. Flow (vph)	43	17	2	290	499	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	17	2	290	505	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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 34.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	16	2	270	464	6
Future Volume (Veh/h)	40	16	2	270	464	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	43	17	2	290	499	6
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	796	502	505			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	796	502	505			
tC, single (s)	7.1	6.8	4.1			
tC, 2 stage (s)						
tF (s)	4.1	3.8	2.2			
p0 queue free %	85	96	100			
cM capacity (veh/h)	278	475	1070			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	43	17	2	290	505
Volume Left	43	0	2	0	0
Volume Right	0	17	0	0	6
cSH	278	475	1070	1700	1700
Volume to Capacity	0.15	0.04	0.00	0.17	0.30
Queue Length 95th (m)	4.1	0.8	0.0	0.0	0.0
Control Delay (s)	20.3	12.9	8.4	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	18.2		0.1		0.0
Approach LOS	C				

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

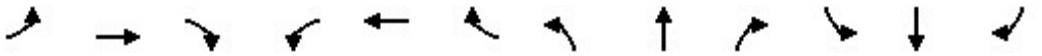
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	59	50	286	444	15
Future Volume (vph)	22	59	50	286	444	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1674	1458	1170	1715	1634	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1674	1458	1170	1715	1634	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	9%	12%	56%	12%	17%	20%
Adj. Flow (vph)	23	63	53	304	472	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	63	53	304	488	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	59	50	286	444	15
Future Volume (Veh/h)	22	59	50	286	444	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	23	63	53	304	472	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	890	480	488			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	890	480	488			
tC, single (s)	6.5	6.3	4.7			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.7			
p0 queue free %	92	89	94			
cM capacity (veh/h)	285	566	846			

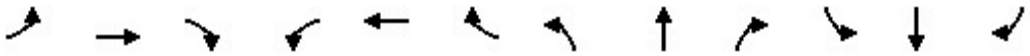
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	86	53	304	488
Volume Left	23	53	0	0
Volume Right	63	0	0	16
cSH	773	846	1700	1700
Volume to Capacity	0.11	0.06	0.18	0.29
Queue Length 95th (m)	2.8	1.5	0.0	0.0
Control Delay (s)	13.9	9.5	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	13.9	1.4		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	40.9%	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)	1	261	21	30	184	1	15	4	36	2	1	0
Future Volume (vph)	1	261	21	30	184	1	15	4	36	2	1	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		0.990			0.999			0.911				
Flt Protected					0.993			0.987			0.968	
Satd. Flow (prot)	0	1713	0	0	1783	0	0	1637	0	0	1860	0
Flt Permitted					0.993			0.987			0.968	
Satd. Flow (perm)	0	1713	0	0	1783	0	0	1637	0	0	1860	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
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%	12%	0%	0%	8%	0%	13%	0%	3%	0%	0%	0%
Adj. Flow (vph)	1	281	23	32	198	1	16	4	39	2	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	305	0	0	231	0	0	59	0	0	3	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	

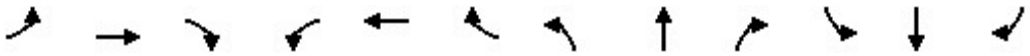
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	261	21	30	184	1	15	4	36	2	1	0
Future Volume (Veh/h)	1	261	21	30	184	1	15	4	36	2	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	1	281	23	32	198	1	16	4	39	2	1	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	199			304			558	558	292	598	568	198
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	199			304			558	558	292	598	568	198
tC, single (s)	4.1			4.1			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			96	99	95	99	100	100
cM capacity (veh/h)	1385			1268			415	430	744	385	424	848

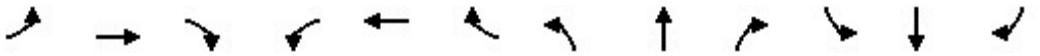
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	305	231	59	3
Volume Left	1	32	16	2
Volume Right	23	1	39	0
cSH	1385	1268	589	397
Volume to Capacity	0.00	0.03	0.10	0.01
Queue Length 95th (m)	0.0	0.6	2.5	0.2
Control Delay (s)	0.0	1.3	11.8	14.1
Lane LOS	A	A	B	B
Approach Delay (s)	0.0	1.3	11.8	14.1
Approach LOS			B	B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	39.8%	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)	3	1267	13	1	1023	14	9	14	2	5	22	0
Future Volume (vph)	3	1267	13	1	1023	14	9	14	2	5	22	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.989				
Flt Protected								0.982			0.991	
Satd. Flow (prot)	0	3505	1633	0	3505	0	0	1729	0	0	1838	0
Flt Permitted								0.982			0.991	
Satd. Flow (perm)	0	3505	1633	0	3505	0	0	1729	0	0	1838	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	67%	4%	0%	0%	4%	0%	0%	7%	50%	20%	0%	0%
Adj. Flow (vph)	3	1306	13	1	1055	14	9	14	2	5	23	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1309	13	0	1070	0	0	25	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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	

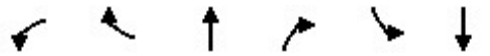
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1267	13	1	1023	14	9	14	2	5	22	0
Future Volume (Veh/h)	3	1267	13	1	1023	14	9	14	2	5	22	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	3	1306	13	1	1055	14	9	14	2	5	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	1069			1319			1853	2383	653	1732	2389	534
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1069			1319			1853	2383	653	1732	2389	534
tC, single (s)	5.4			4.1			7.5	6.6	7.9	7.9	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.9			2.2			3.5	4.1	3.8	3.7	4.0	3.3
p0 queue free %	99			100			57	55	99	83	32	100
cM capacity (veh/h)	371			531			21	31	313	30	34	495

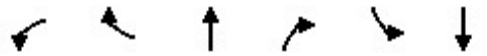
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	438	871	13	528	542	25	28
Volume Left	3	0	0	1	0	9	5
Volume Right	0	0	13	0	14	2	0
cSH	371	1700	1700	531	1700	28	33
Volume to Capacity	0.01	0.51	0.01	0.00	0.32	0.88	0.84
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0	21.7	22.3
Control Delay (s)	0.3	0.0	0.0	0.1	0.0	330.7	283.9
Lane LOS	A			A		F	F
Approach Delay (s)	0.1			0.0		330.7	283.9
Approach LOS						F	F

Intersection Summary				
Average Delay	6.7			
Intersection Capacity Utilization	47.1%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	31	308	0	29	463
Future Volume (vph)	0	31	308	0	29	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1511	0	1746	0	1772	1642
Flt Permitted					0.950	
Satd. Flow (perm)	1511	0	1746	0	1772	1642
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	10%	10%	0%	3%	17%
Adj. Flow (vph)	0	33	324	0	31	487
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	324	0	31	487
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	31	308	0	29	463
Future Volume (Veh/h)	0	31	308	0	29	463
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	33	324	0	31	487
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	873	324			324	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	873	324			324	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	95			97	
cM capacity (veh/h)	315	699			1230	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	33	324	31	487
Volume Left	0	0	31	0
Volume Right	33	0	0	0
cSH	699	1700	1230	1700
Volume to Capacity	0.05	0.19	0.03	0.29
Queue Length 95th (m)	1.1	0.0	0.6	0.0
Control Delay (s)	10.4	0.0	8.0	0.0
Lane LOS	B		A	
Approach Delay (s)	10.4	0.0	0.5	
Approach LOS	B			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

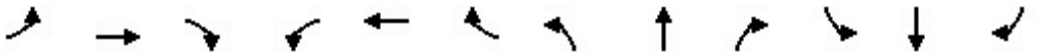
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	26	13	50	55	30
Future Volume (vph)	5	26	13	50	55	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887				0.952	
Flt Protected	0.992			0.990		
Satd. Flow (prot)	1419	0	0	1262	1618	0
Flt Permitted	0.992			0.990		
Satd. Flow (perm)	1419	0	0	1262	1618	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	23%	38%	54%	13%	13%
Adj. Flow (vph)	6	30	15	58	64	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	73	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	26	13	50	55	30
Future Volume (Veh/h)	5	26	13	50	55	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	6	30	15	58	64	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	170	82	99			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	170	82	99			
tC, single (s)	6.4	6.4	4.5			
tC, 2 stage (s)						
tF (s)	3.5	3.5	2.5			
p0 queue free %	99	97	99			
cM capacity (veh/h)	816	923	1296			

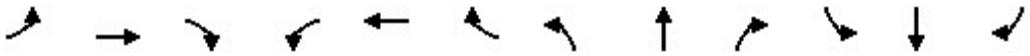
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	36	73	99
Volume Left	6	15	0
Volume Right	30	0	35
cSH	903	1296	1700
Volume to Capacity	0.04	0.01	0.06
Queue Length 95th (m)	0.9	0.3	0.0
Control Delay (s)	9.2	1.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	1.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.2		
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)	0	3	16	15	2	5	12	3	31	21	31	1
Future Volume (vph)	0	3	16	15	2	5	12	3	31	21	31	1
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		0.885			0.970			0.909			0.998	
Flt Protected					0.967			0.987			0.980	
Satd. Flow (prot)	0	1547	0	0	1802	0	0	1042	0	0	1854	0
Flt Permitted					0.967			0.987			0.980	
Satd. Flow (perm)	0	1547	0	0	1802	0	0	1042	0	0	1854	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	67%	0%	0%	0%	0%	17%	0%	90%	0%	0%	100%
Adj. Flow (vph)	0	4	23	21	3	7	17	4	44	30	44	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	31	0	0	65	0	0	75	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	3	16	15	2	5	12	3	31	21	31	1
Future Volume (vph)	0	3	16	15	2	5	12	3	31	21	31	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	4	23	21	3	7	17	4	44	30	44	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	27	31	65	75
Volume Left (vph)	0	21	17	30
Volume Right (vph)	23	7	44	1
Hadj (s)	-0.34	0.00	0.76	0.09
Departure Headway (s)	3.9	4.3	4.9	4.2
Degree Utilization, x	0.03	0.04	0.09	0.09
Capacity (veh/h)	879	813	721	841
Control Delay (s)	7.0	7.4	8.3	7.6
Approach Delay (s)	7.0	7.4	8.3	7.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	19.1%	ICU Level of Service	A	
Analysis Period (min)	15			

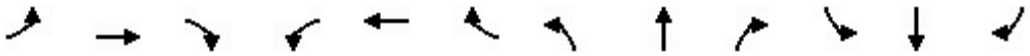
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	277	0	0	201	0	0
Future Volume (vph)	277	0	0	201	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1715	0	0	1795	1921	0
Flt Permitted						
Satd. Flow (perm)	1715	0	0	1795	1921	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	12%	0%	0%	7%	0%	0%
Adj. Flow (vph)	292	0	0	212	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	292	0	0	212	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	277	0	0	201	0	0
Future Volume (Veh/h)	277	0	0	201	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	292	0	0	212	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)	184					
pX, platoon unblocked						
vC, conflicting volume			292		504	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			292		504	292
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)			1281		531	752

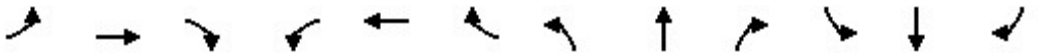
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	292	212	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1281	1700
Volume to Capacity	0.17	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		17.9%	ICU Level of Service
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	3	3	0	1	1	49	0	0	66	0
Future Volume (vph)	0	0	3	3	0	1	1	49	0	0	66	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		0.865			0.973							
Flt Protected					0.962			0.999				
Satd. Flow (prot)	0	1662	0	0	1798	0	0	1230	0	0	1731	0
Flt Permitted					0.962			0.999				
Satd. Flow (perm)	0	1662	0	0	1798	0	0	1230	0	0	1731	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	57%	0%	0%	11%	0%
Adj. Flow (vph)	0	0	4	4	0	1	1	61	0	0	83	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	5	0	0	62	0	0	83	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 13.5%		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	3	3	0	1	1	49	0	0	66	0
Future Volume (Veh/h)	0	0	3	3	0	1	1	49	0	0	66	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	4	4	0	1	1	61	0	0	82	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	146	145	82	149	145	61	82			61		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	146	145	82	149	145	61	82			61		
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)	826	750	983	820	750	1010	1528			1555		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	5	62	82
Volume Left	0	4	1	0
Volume Right	4	1	0	0
cSH	983	852	1528	1555
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length 95th (m)	0.1	0.1	0.0	0.0
Control Delay (s)	8.7	9.3	0.1	0.0
Lane LOS	A	A	A	
Approach Delay (s)	8.7	9.3	0.1	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	13.5%	ICU Level of Service	A	
Analysis Period (min)	15			

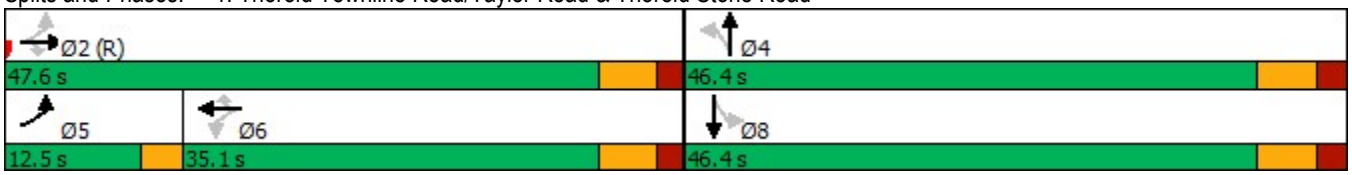
Appendix A Subsection – Future Total Horizon 3: 2036 Volumes (AM & PM)

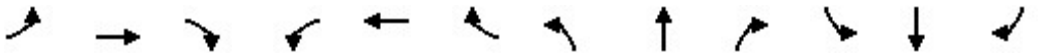
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	268	808	34	19	991	38	26	124	31	26	73	204
Future Volume (vph)	268	808	34	19	991	38	26	124	31	26	73	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.970			0.889	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1601	3544	1498	1825	3544	1633	1755	1691	0	1534	1491	0
Flt Permitted	0.135			0.323			0.267			0.573		
Satd. Flow (perm)	227	3544	1498	621	3544	1633	493	1691	0	925	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39			74		17			187	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
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
Heavy Vehicles (%)	14%	3%	9%	0%	3%	0%	4%	8%	19%	19%	16%	14%
Adj. Flow (vph)	291	878	37	21	1077	41	28	135	34	28	79	222
Shared Lane Traffic (%)												
Lane Group Flow (vph)	291	878	37	21	1077	41	28	169	0	28	301	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	69.6	66.5	66.5	40.7	40.7	40.7	15.0	15.0		15.0	15.0	
Actuated g/C Ratio	0.74	0.71	0.71	0.43	0.43	0.43	0.16	0.16		0.16	0.16	
v/c Ratio	0.58	0.35	0.03	0.08	0.70	0.05	0.36	0.60		0.19	0.76	
Control Delay	17.2	6.4	2.2	19.1	25.9	1.9	45.8	40.7		34.7	27.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	17.2	6.4	2.2	19.1	25.9	1.9	45.8	40.7		34.7	27.1	
LOS	B	A	A	B	C	A	D	D		C	C	
Approach Delay		8.9			24.9			41.5			27.7	
Approach LOS		A			C			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	268	808	34	19	991	38	26	124	31	26	73	204
Future Volume (vph)	268	808	34	19	991	38	26	124	31	26	73	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1601	3544	1498	1825	3544	1633	1755	1690		1534	1492	
Flt Permitted	0.14	1.00	1.00	0.32	1.00	1.00	0.27	1.00		0.57	1.00	
Satd. Flow (perm)	228	3544	1498	621	3544	1633	493	1690		925	1492	
Peak-hour factor, PHF	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)	291	878	37	21	1077	41	28	135	34	28	79	222
RTOR Reduction (vph)	0	0	11	0	0	23	0	14	0	0	157	0
Lane Group Flow (vph)	291	878	26	21	1077	18	28	155	0	28	144	0
Heavy Vehicles (%)	14%	3%	9%	0%	3%	0%	4%	8%	19%	19%	16%	14%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	66.5	66.5	66.5	40.7	40.7	40.7	15.0	15.0		15.0	15.0	
Effective Green, g (s)	66.5	66.5	66.5	40.7	40.7	40.7	15.0	15.0		15.0	15.0	
Actuated g/C Ratio	0.71	0.71	0.71	0.43	0.43	0.43	0.16	0.16		0.16	0.16	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	494	2507	1059	268	1534	707	78	269		147	238	
v/s Ratio Prot	c0.14	0.25			c0.30			0.09			c0.10	
v/s Ratio Perm	0.27		0.02	0.03		0.01	0.06			0.03		
v/c Ratio	0.59	0.35	0.02	0.08	0.70	0.03	0.36	0.58		0.19	0.60	
Uniform Delay, d1	14.5	5.3	4.1	15.6	21.7	15.3	35.2	36.6		34.2	36.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.4	0.0	0.4	2.2	0.0	1.6	2.2		0.4	3.4	
Delay (s)	16.0	5.7	4.1	16.0	23.9	15.3	36.9	38.8		34.6	40.1	
Level of Service	B	A	A	B	C	B	D	D		C	D	
Approach Delay (s)		8.2			23.4			38.5			39.6	
Approach LOS		A			C			D			D	

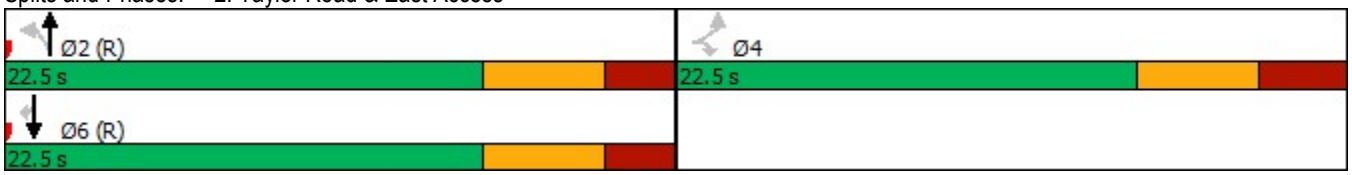
Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	18	19	349	323	12
Future Volume (vph)	10	18	19	349	323	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	913	816	913	1812	1830	978
Flt Permitted	0.950		0.541			
Satd. Flow (perm)	913	816	520	1812	1830	978
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		21				14
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	100%	100%	100%	6%	5%	67%
Adj. Flow (vph)	11	21	22	401	371	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	21	22	401	371	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	40.3	40.3	40.3	40.3
Actuated g/C Ratio	0.22	0.22	0.90	0.90	0.90	0.90
v/c Ratio	0.05	0.11	0.05	0.25	0.23	0.02
Control Delay	14.9	8.9	4.1	3.4	3.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	8.9	4.1	3.4	3.2	2.8
LOS	B	A	A	A	A	A
Approach Delay	11.0			3.4	3.2	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.25			
Intersection Signal Delay: 3.6		Intersection LOS: A	
Intersection Capacity Utilization 38.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	18	19	349	323	12
Future Volume (vph)	10	18	19	349	323	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	913	816	913	1812	1830	978
Flt Permitted	0.95	1.00	0.54	1.00	1.00	1.00
Satd. Flow (perm)	913	816	519	1812	1830	978
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	11	21	22	401	371	14
RTOR Reduction (vph)	0	20	0	0	0	5
Lane Group Flow (vph)	11	1	22	401	371	9
Heavy Vehicles (%)	100%	100%	100%	6%	5%	67%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	2.0	2.0	29.4	29.4	29.4	29.4
Effective Green, g (s)	2.0	2.0	29.4	29.4	29.4	29.4
Actuated g/C Ratio	0.04	0.04	0.65	0.65	0.65	0.65
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	40	36	339	1183	1195	638
v/s Ratio Prot				c0.22	0.20	
v/s Ratio Perm	c0.01	0.00	0.04			0.01
v/c Ratio	0.28	0.03	0.06	0.34	0.31	0.01
Uniform Delay, d1	20.8	20.6	2.8	3.5	3.4	2.7
Progression Factor	1.01	1.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.0	0.4	0.4	0.8	0.7	0.0
Delay (s)	26.1	21.1	3.2	4.3	4.1	2.8
Level of Service	C	C	A	A	A	A
Approach Delay (s)	22.8			4.2	4.0	
Approach LOS	C			A	A	

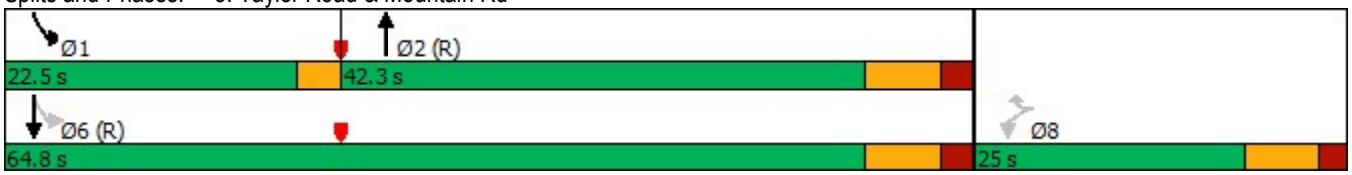
Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

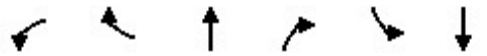
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	187	89	266	84	38	147
Future Volume (vph)	187	89	266	84	38	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.968			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1738	1570	1683	0	1738	1700
Flt Permitted	0.950				0.465	
Satd. Flow (perm)	1738	1570	1683	0	851	1700
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		102	21			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	4%	10%	12%	5%	13%
Adj. Flow (vph)	215	102	306	97	44	169
Shared Lane Traffic (%)						
Lane Group Flow (vph)	215	102	403	0	44	169
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	15.0	15.0	53.9		64.8	60.5
Actuated g/C Ratio	0.17	0.17	0.60		0.72	0.67
v/c Ratio	0.74	0.29	0.40		0.06	0.15
Control Delay	50.9	9.0	12.1		4.4	6.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	50.9	9.0	12.1		4.4	6.2
LOS	D	A	B		A	A
Approach Delay	37.4		12.1			5.9
Approach LOS	D		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	187	89	266	84	38	147
Future Volume (vph)	187	89	266	84	38	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1738	1570	1682		1738	1700
Flt Permitted	0.95	1.00	1.00		0.46	1.00
Satd. Flow (perm)	1738	1570	1682		850	1700
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	215	102	306	97	44	169
RTOR Reduction (vph)	0	85	9	0	0	0
Lane Group Flow (vph)	215	17	394	0	44	169
Heavy Vehicles (%)	5%	4%	10%	12%	5%	13%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	15.0	15.0	52.7		60.5	60.5
Effective Green, g (s)	15.0	15.0	52.7		60.5	60.5
Actuated g/C Ratio	0.17	0.17	0.59		0.67	0.67
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	290	262	987		620	1145
v/s Ratio Prot			c0.23		0.00	c0.10
v/s Ratio Perm	c0.12	0.01			0.04	
v/c Ratio	0.74	0.07	0.40		0.07	0.15
Uniform Delay, d1	35.6	31.5	10.0		5.1	5.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.2	0.1	1.2		0.0	0.3
Delay (s)	44.7	31.6	11.2		5.2	5.6
Level of Service	D	C	B		A	A
Approach Delay (s)	40.5		11.2			5.5
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	3	10	343	190	38
Future Volume (vph)	7	3	10	343	190	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.978	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1067	1228	1521	1762	1688	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1067	1228	1521	1762	1688	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	71%	33%	20%	9%	11%	13%
Adj. Flow (vph)	8	3	11	373	207	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	3	11	373	248	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)	7	3	10	343	190	38
Future Volume (Veh/h)	7	3	10	343	190	38
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)	8	3	11	373	207	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)						
pX, platoon unblocked						
vC, conflicting volume	622	228	248			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622	228	248			
tC, single (s)	7.1	6.5	4.3			
tC, 2 stage (s)						
tF (s)	4.1	3.6	2.4			
p0 queue free %	98	100	99			
cM capacity (veh/h)	353	741	1220			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	8	3	11	373	248
Volume Left	8	0	11	0	0
Volume Right	0	3	0	0	41
cSH	353	741	1220	1700	1700
Volume to Capacity	0.02	0.00	0.01	0.22	0.15
Queue Length 95th (m)	0.5	0.1	0.2	0.0	0.0
Control Delay (s)	15.4	9.9	8.0	0.0	0.0
Lane LOS	C	A	A		
Approach Delay (s)	13.9		0.2		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

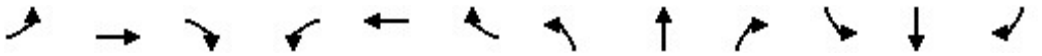
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	11	23	45	332	292	30
Future Volume (vph)	11	23	45	332	292	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.988	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1547	1396	1674	1700	1631	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1547	1396	1674	1700	1631	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	18%	17%	9%	13%	17%	10%
Adj. Flow (vph)	12	25	48	357	314	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	25	48	357	346	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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 33.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	23	45	332	292	30
Future Volume (Veh/h)	11	23	45	332	292	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	12	25	48	357	314	32
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	783	330	346			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	783	330	346			
tC, single (s)	6.6	6.4	4.2			
tC, 2 stage (s)						
tF (s)	3.7	3.5	2.3			
p0 queue free %	96	96	96			
cM capacity (veh/h)	327	678	1175			

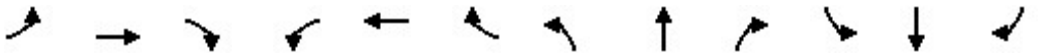
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	37	48	357	346
Volume Left	12	48	0	0
Volume Right	25	0	0	32
cSH	1004	1175	1700	1700
Volume to Capacity	0.04	0.04	0.21	0.20
Queue Length 95th (m)	0.9	1.0	0.0	0.0
Control Delay (s)	12.4	8.2	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	12.4	1.0		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	33.9%	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	140	9	22	247	8	18	5	51	3	2	4
Future Volume (vph)	0	140	9	22	247	8	18	5	51	3	2	4
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		0.992			0.996			0.907			0.940	
Flt Protected					0.996			0.988			0.984	
Satd. Flow (prot)	0	1728	0	0	1809	0	0	1675	0	0	1777	0
Flt Permitted					0.996			0.988			0.984	
Satd. Flow (perm)	0	1728	0	0	1809	0	0	1675	0	0	1777	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	11%	0%	0%	6%	0%	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	0	149	10	23	263	9	19	5	54	3	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	295	0	0	78	0	0	9	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	

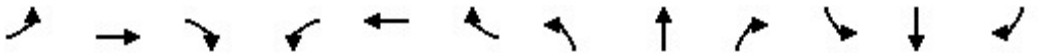
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	140	9	22	247	8	18	5	51	3	2	4
Future Volume (Veh/h)	0	140	9	22	247	8	18	5	51	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	149	10	23	263	9	19	5	54	3	2	4
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	272			159			472	472	154	524	472	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	272			159			472	472	154	524	472	268
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			96	99	94	99	100	99
cM capacity (veh/h)	1303			1433			495	485	887	430	485	776

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	159	295	78	9
Volume Left	0	23	19	3
Volume Right	10	9	54	4
cSH	1303	1433	712	554
Volume to Capacity	0.00	0.02	0.11	0.02
Queue Length 95th (m)	0.0	0.4	2.8	0.4
Control Delay (s)	0.0	0.7	10.7	11.6
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.7	10.7	11.6
Approach LOS			B	B

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	37.9%	ICU Level of Service	A	
Analysis Period (min)	15			



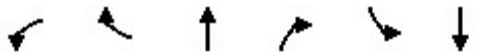
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	875	5	4	1056	12	11	9	4	5	13	0
Future Volume (vph)	9	875	5	4	1056	12	11	9	4	5	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.979				
Flt Protected		0.999						0.977			0.987	
Satd. Flow (prot)	0	3476	1633	0	3525	0	0	1700	0	0	1716	0
Flt Permitted		0.999						0.977			0.987	
Satd. Flow (perm)	0	3476	1633	0	3525	0	0	1700	0	0	1716	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	89%	4%	0%	25%	3%	25%	0%	11%	25%	40%	0%	0%
Adj. Flow (vph)	10	931	5	4	1123	13	12	10	4	5	14	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	941	5	0	1140	0	0	26	0	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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 46.4%		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)	9	875	5	4	1056	12	11	9	4	5	13	0
Future Volume (Veh/h)	9	875	5	4	1056	12	11	9	4	5	13	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	931	5	4	1123	13	12	10	4	5	14	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	1136			936			1528	2095	466	1632	2094	568
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1136			936			1528	2095	466	1632	2094	568
tC, single (s)	5.9			4.6			7.5	6.7	7.4	8.3	6.5	6.9
tC, 2 stage (s)												
tF (s)	3.1			2.5			3.5	4.1	3.5	3.9	4.0	3.3
p0 queue free %	96			99			81	77	99	86	72	100
cM capacity (veh/h)	285			601			63	44	486	36	51	471

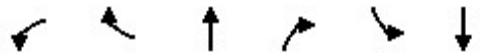
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	320	621	5	566	574	26	19
Volume Left	10	0	0	4	0	12	5
Volume Right	0	0	5	0	13	4	0
cSH	285	1700	1700	601	1700	61	46
Volume to Capacity	0.04	0.37	0.00	0.01	0.34	0.43	0.41
Queue Length 95th (m)	0.8	0.0	0.0	0.2	0.0	12.3	11.2
Control Delay (s)	1.3	0.0	0.0	0.2	0.0	102.1	130.3
Lane LOS	A			A		F	F
Approach Delay (s)	0.4			0.1		102.1	130.3
Approach LOS						F	F

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	46.4%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	30	332	2	19	339
Future Volume (vph)	1	30	332	2	19	339
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.869		0.999			
Flt Protected	0.999				0.950	
Satd. Flow (prot)	1201	0	1715	0	1644	1656
Flt Permitted	0.999				0.950	
Satd. Flow (perm)	1201	0	1715	0	1644	1656
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	40%	12%	0%	11%	16%
Adj. Flow (vph)	1	33	365	2	21	373
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	367	0	21	373
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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	97		14	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	30	332	2	19	339
Future Volume (Veh/h)	1	30	332	2	19	339
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	33	365	2	21	373
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	781	366			367	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	781	366			367	
tC, single (s)	6.4	6.6			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.7			2.3	
p0 queue free %	100	95			98	
cM capacity (veh/h)	359	602			1144	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	34	367	21	373
Volume Left	1	0	21	0
Volume Right	33	2	0	0
cSH	590	1700	1144	1700
Volume to Capacity	0.06	0.22	0.02	0.22
Queue Length 95th (m)	1.4	0.0	0.4	0.0
Control Delay (s)	11.5	0.0	8.2	0.0
Lane LOS	B		A	
Approach Delay (s)	11.5	0.0	0.4	
Approach LOS	B			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	29	12	26	53	22	8
Future Volume (vph)	29	12	26	53	22	8
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	0.960				0.964	
Flt Protected	0.966			0.984		
Satd. Flow (prot)	1557	0	0	1673	1545	0
Flt Permitted	0.966			0.984		
Satd. Flow (perm)	1557	0	0	1673	1545	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	10%	25%	27%	6%	18%	25%
Adj. Flow (vph)	36	15	33	66	28	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	0	99	38	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	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			

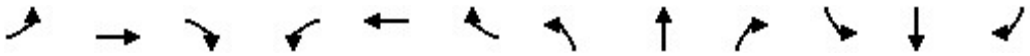
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	12	26	53	22	8
Future Volume (Veh/h)	29	12	26	53	22	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	36	15	32	66	28	10
Pedestrians						
Lane Width (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	163	33	38			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	163	33	38			
tC, single (s)	6.5	6.5	4.4			
tC, 2 stage (s)						
tF (s)	3.6	3.5	2.4			
p0 queue free %	95	98	98			
cM capacity (veh/h)	791	978	1425			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	51	98	38
Volume Left	36	32	0
Volume Right	15	0	10
cSH	838	1425	1700
Volume to Capacity	0.06	0.02	0.02
Queue Length 95th (m)	1.5	0.5	0.0
Control Delay (s)	9.6	2.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	2.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	20.9%	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	1	6	11	6	31	6	36	12	6	1	0
Future Volume (vph)	0	1	6	11	6	31	6	36	12	6	1	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		0.880			0.914			0.970				
Flt Protected					0.989			0.994			0.957	
Satd. Flow (prot)	0	1522	0	0	1604	0	0	1665	0	0	1839	0
Flt Permitted					0.989			0.994			0.957	
Satd. Flow (perm)	0	1522	0	0	1604	0	0	1665	0	0	1839	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	100%	0%	18%	17%	3%	17%	0%	42%	0%	0%	0%
Adj. Flow (vph)	0	1	8	14	8	39	8	45	15	8	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	9	0	0	61	0	0	68	0	0	9	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	6	11	6	31	6	36	12	6	1	0
Future Volume (vph)	0	1	6	11	6	31	6	36	12	6	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	1	8	14	8	39	8	45	15	8	1	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	9	61	68	9
Volume Left (vph)	0	14	8	8
Volume Right (vph)	8	39	15	0
Hadj (s)	-0.34	-0.20	0.08	0.18
Departure Headway (s)	3.8	3.9	4.1	4.3
Degree Utilization, x	0.01	0.07	0.08	0.01
Capacity (veh/h)	924	905	846	819
Control Delay (s)	6.8	7.2	7.5	7.3
Approach Delay (s)	6.8	7.2	7.5	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.3			
Level of Service	A			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A	
Analysis Period (min)	15			

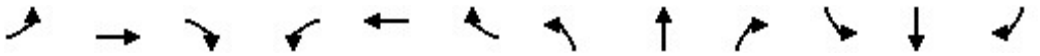
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	140	1	0	269	1	0
Future Volume (vph)	140	1	0	269	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1730	0	0	1830	1825	0
Flt Permitted					0.950	
Satd. Flow (perm)	1730	0	0	1830	1825	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	11%	0%	0%	5%	0%	0%
Adj. Flow (vph)	173	1	0	332	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	0	0	332	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	140	1	0	269	1	0
Future Volume (Veh/h)	140	1	0	269	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	173	1	0	332	1	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)	184					
pX, platoon unblocked						
vC, conflicting volume			174		506	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			174		506	174
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)			1415		530	875

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	174	332	1
Volume Left	0	0	1
Volume Right	1	0	0
cSH	1700	1415	530
Volume to Capacity	0.10	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	11.8
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.8
Approach LOS			B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	24.2%	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	10	0	0	2	2	62	3	3	17	0
Future Volume (vph)	0	0	10	0	0	2	2	62	3	3	17	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		0.865			0.865			0.995				
Flt Protected								0.999			0.993	
Satd. Flow (prot)	0	1511	0	0	1662	0	0	1732	0	0	1580	0
Flt Permitted								0.999			0.993	
Satd. Flow (perm)	0	1511	0	0	1662	0	0	1732	0	0	1580	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	10%	0%	0%	0%	0%	11%	0%	0%	24%	0%
Adj. Flow (vph)	0	0	11	0	0	2	2	69	3	3	19	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	0	0	2	0	0	74	0	0	22	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 13.8%		ICU Level of Service A	
Analysis Period (min) 15			

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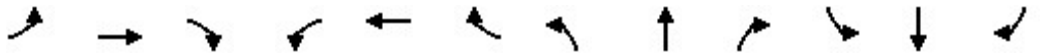


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	10	0	0	2	2	62	3	3	17	0
Future Volume (Veh/h)	0	0	10	0	0	2	2	62	3	3	17	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	11	0	0	2	2	69	3	3	19	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	102	101	19	110	100	70	19			72		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	102	101	19	110	100	70	19			72		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	880	790	1036	861	792	998	1611			1541		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	2	74	22
Volume Left	0	0	2	3
Volume Right	11	2	3	0
cSH	1036	998	1611	1541
Volume to Capacity	0.01	0.00	0.00	0.00
Queue Length 95th (m)	0.2	0.0	0.0	0.0
Control Delay (s)	8.5	8.6	0.2	1.0
Lane LOS	A	A	A	A
Approach Delay (s)	8.5	8.6	0.2	1.0
Approach LOS	A	A		

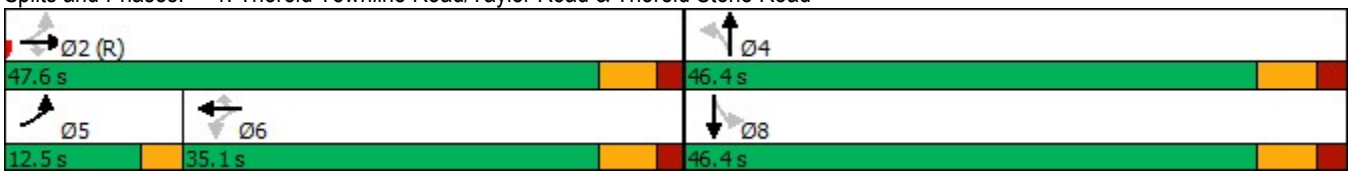
Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	13.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	1277	48	36	989	29	57	90	20	51	169	251
Future Volume (vph)	238	1277	48	36	989	29	57	90	20	51	169	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.972			0.910	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	3579	1512	1825	3579	1276	1706	1740	0	1825	1634	0
Flt Permitted	0.140			0.207			0.210			0.684		
Satd. Flow (perm)	247	3579	1512	398	3579	1276	377	1740	0	1314	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			49			74		15			99	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	9%	2%	8%	0%	2%	28%	7%	9%	0%	0%	7%	7%
Adj. Flow (vph)	245	1316	49	37	1020	30	59	93	21	53	174	259
Shared Lane Traffic (%)												
Lane Group Flow (vph)	245	1316	49	37	1020	30	59	114	0	53	433	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Dont Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	58.8	55.7	55.7	38.1	38.1	38.1	25.8	25.8		25.8	25.8	
Actuated g/C Ratio	0.63	0.59	0.59	0.41	0.41	0.41	0.27	0.27		0.27	0.27	
v/c Ratio	0.65	0.62	0.05	0.23	0.70	0.05	0.57	0.23		0.15	0.83	
Control Delay	22.4	15.6	3.9	27.8	28.8	0.2	48.8	21.6		23.5	37.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	22.4	15.6	3.9	27.8	28.8	0.2	48.8	21.6		23.5	37.8	
LOS	C	B	A	C	C	A	D	C		C	D	
Approach Delay		16.2			28.0			30.9			36.3	
Approach LOS		B			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 97.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	1277	48	36	989	29	57	90	20	51	169	251
Future Volume (vph)	238	1277	48	36	989	29	57	90	20	51	169	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1674	3579	1512	1825	3579	1276	1706	1740		1825	1634	
Flt Permitted	0.14	1.00	1.00	0.21	1.00	1.00	0.21	1.00		0.68	1.00	
Satd. Flow (perm)	246	3579	1512	399	3579	1276	377	1740		1313	1634	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	245	1316	49	37	1020	30	59	93	21	53	174	259
RTOR Reduction (vph)	0	0	20	0	0	18	0	11	0	0	72	0
Lane Group Flow (vph)	245	1316	29	37	1020	12	59	103	0	53	361	0
Heavy Vehicles (%)	9%	2%	8%	0%	2%	28%	7%	9%	0%	0%	7%	7%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	55.7	55.7	55.7	38.1	38.1	38.1	25.8	25.8		25.8	25.8	
Effective Green, g (s)	55.7	55.7	55.7	38.1	38.1	38.1	25.8	25.8		25.8	25.8	
Actuated g/C Ratio	0.59	0.59	0.59	0.41	0.41	0.41	0.27	0.27		0.27	0.27	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	367	2120	895	161	1450	517	103	477		360	448	
v/s Ratio Prot	c0.10	0.37			0.29			0.06			c0.22	
v/s Ratio Perm	c0.29		0.02	0.09		0.01	0.16			0.04		
v/c Ratio	0.67	0.62	0.03	0.23	0.70	0.02	0.57	0.22		0.15	0.81	
Uniform Delay, d1	13.6	12.3	8.0	18.3	23.3	16.8	29.4	26.3		25.8	31.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.1	1.4	0.1	2.1	2.3	0.1	5.6	0.1		0.1	9.8	
Delay (s)	17.7	13.7	8.0	20.4	25.6	16.8	34.9	26.4		25.9	41.6	
Level of Service	B	B	A	C	C	B	C	C		C	D	
Approach Delay (s)		14.2			25.1			29.3			39.9	
Approach LOS		B			C			C			D	

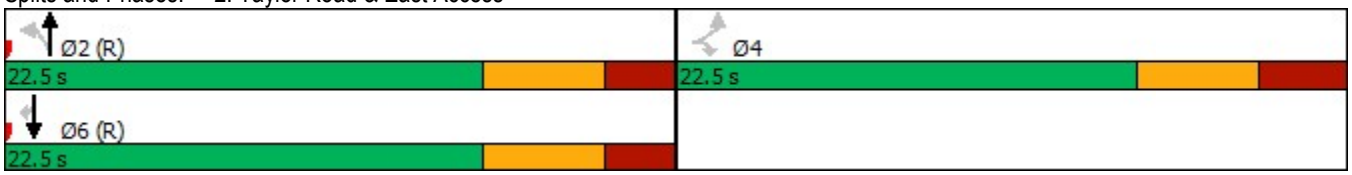
Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	15	4	341	476	10
Future Volume (vph)	9	15	4	341	476	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1025	846	913	1830	1847	816
Flt Permitted	0.950		0.482			
Satd. Flow (perm)	1025	846	463	1830	1847	816
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		16				10
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	78%	93%	100%	5%	4%	100%
Adj. Flow (vph)	9	16	4	355	496	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	16	4	355	496	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)	10.0	10.0	40.3	40.3	40.3	40.3
Actuated g/C Ratio	0.22	0.22	0.90	0.90	0.90	0.90
v/c Ratio	0.04	0.08	0.01	0.22	0.30	0.01
Control Delay	14.3	9.0	4.0	3.2	3.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	9.0	4.0	3.2	3.6	2.9
LOS	B	A	A	A	A	A
Approach Delay	10.9			3.2	3.6	
Approach LOS	B			A	A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay: 3.6		Intersection LOS: A	
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	15	4	341	476	10
Future Volume (vph)	9	15	4	341	476	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1025	846	913	1830	1847	816
Flt Permitted	0.95	1.00	0.48	1.00	1.00	1.00
Satd. Flow (perm)	1025	846	463	1830	1847	816
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	9	16	4	355	496	10
RTOR Reduction (vph)	0	15	0	0	0	3
Lane Group Flow (vph)	9	1	4	355	496	7
Heavy Vehicles (%)	78%	93%	100%	5%	4%	100%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	2.0	2.0	29.4	29.4	29.4	29.4
Effective Green, g (s)	2.0	2.0	29.4	29.4	29.4	29.4
Actuated g/C Ratio	0.04	0.04	0.65	0.65	0.65	0.65
Clearance Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Lane Grp Cap (vph)	45	37	302	1195	1206	533
v/s Ratio Prot				0.19	c0.27	
v/s Ratio Perm	c0.01	0.00	0.01			0.01
v/c Ratio	0.20	0.02	0.01	0.30	0.41	0.01
Uniform Delay, d1	20.7	20.6	2.7	3.4	3.7	2.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	0.3	0.1	0.6	1.0	0.0
Delay (s)	23.7	20.8	2.8	4.0	4.7	2.8
Level of Service	C	C	A	A	A	A
Approach Delay (s)	21.9			4.0	4.7	
Approach LOS	C			A	A	

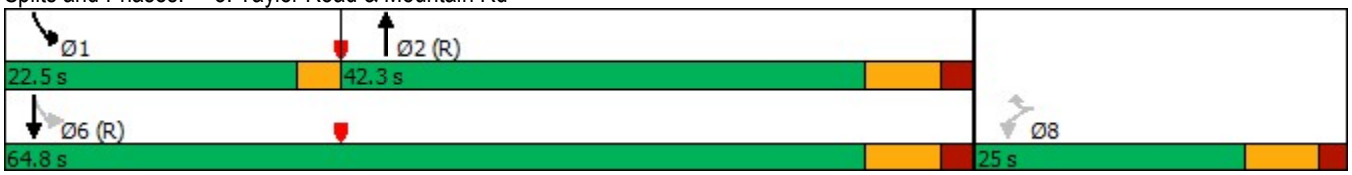
Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

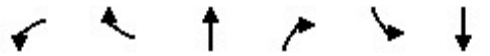
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	71	208	134	114	355
Future Volume (vph)	131	71	208	134	114	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.947			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1738	1570	1704	0	1789	1812
Flt Permitted	0.950				0.495	
Satd. Flow (perm)	1738	1570	1704	0	932	1812
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		75	42			
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	4%	4%	11%	2%	6%
Adj. Flow (vph)	138	75	219	141	120	374
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	75	360	0	120	374
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Dont Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)	12.4	12.4	51.9		67.4	63.1
Actuated g/C Ratio	0.14	0.14	0.58		0.75	0.70
v/c Ratio	0.57	0.27	0.36		0.15	0.29
Control Delay	45.4	10.7	10.6		3.9	6.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	45.4	10.7	10.6		3.9	6.1
LOS	D	B	B		A	A
Approach Delay	33.2		10.6			5.6
Approach LOS	C		B			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	71	208	134	114	355
Future Volume (vph)	131	71	208	134	114	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.3		3.0	7.3
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1738	1570	1705		1789	1812
Flt Permitted	0.95	1.00	1.00		0.49	1.00
Satd. Flow (perm)	1738	1570	1705		932	1812
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	138	75	219	141	120	374
RTOR Reduction (vph)	0	65	18	0	0	0
Lane Group Flow (vph)	138	10	342	0	120	374
Heavy Vehicles (%)	5%	4%	4%	11%	2%	6%
Turn Type	Perm	Perm	NA		pm+pt	NA
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)	12.4	12.4	51.9		63.1	63.1
Effective Green, g (s)	12.4	12.4	51.9		63.1	63.1
Actuated g/C Ratio	0.14	0.14	0.58		0.70	0.70
Clearance Time (s)	7.0	7.0	7.3		3.0	7.3
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Lane Grp Cap (vph)	239	216	985		733	1273
v/s Ratio Prot			c0.20		0.01	c0.21
v/s Ratio Perm	c0.08	0.01			0.10	
v/c Ratio	0.58	0.05	0.35		0.16	0.29
Uniform Delay, d1	36.2	33.6	10.0		4.4	5.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.6	0.1	1.0		0.1	0.6
Delay (s)	38.9	33.6	11.0		4.5	5.6
Level of Service	D	C	B		A	A
Approach Delay (s)	37.0		11.0			5.3
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	14	2	274	471	6
Future Volume (vph)	35	14	2	274	471	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.998	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1332	1142	1217	1847	1855	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1332	1142	1217	1847	1855	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	37%	43%	50%	4%	3%	33%
Adj. Flow (vph)	38	15	2	295	506	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	15	2	295	512	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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 35.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	14	2	274	471	6
Future Volume (Veh/h)	35	14	2	274	471	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	38	15	2	295	506	6
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	808	509	512			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	808	509	512			
tC, single (s)	6.8	6.6	4.6			
tC, 2 stage (s)						
tF (s)	3.8	3.7	2.7			
p0 queue free %	88	97	100			
cM capacity (veh/h)	306	491	848			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	38	15	2	295	512
Volume Left	38	0	2	0	0
Volume Right	0	15	0	0	6
cSH	306	491	848	1700	1700
Volume to Capacity	0.12	0.03	0.00	0.17	0.30
Queue Length 95th (m)	3.2	0.7	0.1	0.0	0.0
Control Delay (s)	18.4	12.6	9.3	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	16.8		0.1		0.0
Approach LOS	C				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

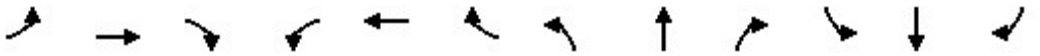
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	59	39	292	447	14
Future Volume (vph)	22	59	39	292	447	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1825	1633	1209	1812	1790	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1825	1633	1209	1812	1790	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	51%	6%	6%	36%
Adj. Flow (vph)	23	63	41	311	476	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	63	41	311	491	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	59	39	292	447	14
Future Volume (Veh/h)	22	59	39	292	447	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	23	63	41	311	476	15
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked	1.00					
vC, conflicting volume	876	484	491			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	876	484	491			
tC, single (s)	6.4	6.2	4.6			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.7			
p0 queue free %	92	89	95			
cM capacity (veh/h)	306	587	861			

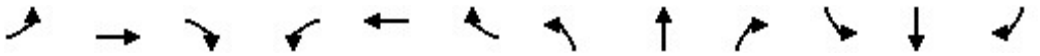
Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	86	41	311	491
Volume Left	23	41	0	0
Volume Right	63	0	0	15
cSH	802	861	1700	1700
Volume to Capacity	0.11	0.05	0.18	0.29
Queue Length 95th (m)	2.7	1.1	0.0	0.0
Control Delay (s)	13.4	9.4	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	13.4	1.1		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	41.0%	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)	1	262	21	30	185	1	14	4	36	2	1	0
Future Volume (vph)	1	262	21	30	185	1	14	4	36	2	1	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		0.990			0.999			0.909				
Flt Protected					0.993			0.987			0.968	
Satd. Flow (prot)	0	1771	0	0	1843	0	0	1663	0	0	1395	0
Flt Permitted					0.993			0.987			0.968	
Satd. Flow (perm)	0	1771	0	0	1843	0	0	1663	0	0	1395	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
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%	8%	0%	0%	4%	0%	14%	0%	0%	50%	0%	0%
Adj. Flow (vph)	1	282	23	32	199	1	15	4	39	2	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	306	0	0	232	0	0	58	0	0	3	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 39.9%		ICU Level of Service A	
Analysis Period (min) 15			



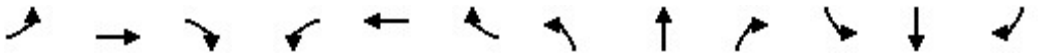
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	1	262	21	30	185	1	14	4	36	2	1	0
Future Volume (Veh/h)	1	262	21	30	185	1	14	4	36	2	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	1	282	23	32	199	1	15	4	39	2	1	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	200			305			560	560	294	600	570	200
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	200			305			560	560	294	600	570	200
tC, single (s)	4.1			4.1			7.2	6.5	6.2	7.6	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.3	4.0	4.0	3.3
p0 queue free %	100			97			96	99	95	99	100	100
cM capacity (veh/h)	1384			1267			412	429	751	323	423	847

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	306	232	58	3
Volume Left	1	32	15	2
Volume Right	23	1	39	0
cSH	1384	1267	594	351
Volume to Capacity	0.00	0.03	0.10	0.01
Queue Length 95th (m)	0.0	0.6	2.5	0.2
Control Delay (s)	0.0	1.3	11.7	15.3
Lane LOS	A	A	B	C
Approach Delay (s)	0.0	1.3	11.7	15.3
Approach LOS			B	C

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	39.9%	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)	2	1318	13	1	1060	14	9	14	2	5	22	0
Future Volume (vph)	2	1318	13	1	1060	14	9	14	2	5	22	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.989				
Flt Protected								0.982			0.991	
Satd. Flow (prot)	0	3576	1633	0	3569	0	0	1866	0	0	1838	0
Flt Permitted								0.982			0.991	
Satd. Flow (perm)	0	3576	1633	0	3569	0	0	1866	0	0	1838	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	50%	2%	0%	0%	2%	7%	0%	0%	0%	20%	0%	0%
Adj. Flow (vph)	2	1359	13	1	1093	14	9	14	2	5	23	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1361	13	0	1108	0	0	25	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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	

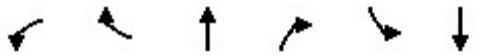
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1318	13	1	1060	14	9	14	2	5	22	0
Future Volume (Veh/h)	2	1318	13	1	1060	14	9	14	2	5	22	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	1359	13	1	1093	14	9	14	2	5	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	1107			1372			1923	2472	680	1794	2478	554
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1107			1372			1923	2472	680	1794	2478	554
tC, single (s)	5.1			4.1			7.5	6.5	6.9	7.9	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.7			2.2			3.5	4.0	3.3	3.7	4.0	3.3
p0 queue free %	100			100			41	54	99	81	23	100
cM capacity (veh/h)	409			507			15	30	399	26	30	481

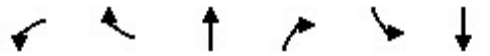
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	455	906	13	548	560	25	28
Volume Left	2	0	0	1	0	9	5
Volume Right	0	0	13	0	14	2	0
cSH	409	1700	1700	507	1700	24	29
Volume to Capacity	0.00	0.53	0.01	0.00	0.33	1.06	0.96
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	24.0	24.1
Control Delay (s)	0.2	0.0	0.0	0.1	0.0	441.9	349.6
Lane LOS	A			A		F	F
Approach Delay (s)	0.1			0.0		441.9	349.6
Approach LOS						F	F

Intersection Summary				
Average Delay	8.3			
Intersection Capacity Utilization	47.8%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	30	314	0	29	465
Future Volume (vph)	0	30	314	0	29	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1553	0	1812	0	1772	1779
Flt Permitted					0.950	
Satd. Flow (perm)	1553	0	1812	0	1772	1779
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	7%	6%	0%	3%	8%
Adj. Flow (vph)	0	32	331	0	31	489
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	331	0	31	489
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	30	314	0	29	465
Future Volume (Veh/h)	0	30	314	0	29	465
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	32	331	0	31	489
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	882	331			331	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	882	331			331	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	95			97	
cM capacity (veh/h)	311	699			1223	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	32	331	31	489
Volume Left	0	0	31	0
Volume Right	32	0	0	0
cSH	699	1700	1223	1700
Volume to Capacity	0.05	0.19	0.03	0.29
Queue Length 95th (m)	1.1	0.0	0.6	0.0
Control Delay (s)	10.4	0.0	8.0	0.0
Lane LOS	B		A	
Approach Delay (s)	10.4	0.0	0.5	
Approach LOS	B			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

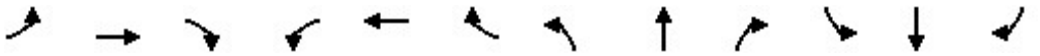
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	26	12	39	55	30
Future Volume (vph)	5	26	12	39	55	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.887				0.952	
Flt Protected	0.992			0.988		
Satd. Flow (prot)	1690	0	0	1261	1829	0
Flt Permitted	0.992			0.988		
Satd. Flow (perm)	1690	0	0	1261	1829	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	33%	56%	0%	0%
Adj. Flow (vph)	6	30	14	45	64	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	59	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	26	12	39	55	30
Future Volume (Veh/h)	5	26	12	39	55	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	6	30	14	45	64	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	154	82	99			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	154	82	99			
tC, single (s)	6.4	6.2	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.5			
p0 queue free %	99	97	99			
cM capacity (veh/h)	833	984	1321			

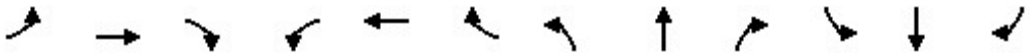
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	36	59	99
Volume Left	6	14	0
Volume Right	30	0	35
cSH	955	1321	1700
Volume to Capacity	0.04	0.01	0.06
Queue Length 95th (m)	0.9	0.2	0.0
Control Delay (s)	8.9	1.9	0.0
Lane LOS	A	A	
Approach Delay (s)	8.9	1.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	19.4%	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	3	16	15	2	5	12	3	20	21	31	1
Future Volume (vph)	0	3	16	15	2	5	12	3	20	21	31	1
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		0.885			0.970			0.923			0.998	
Flt Protected					0.967			0.983			0.980	
Satd. Flow (prot)	0	1547	0	0	1802	0	0	1108	0	0	1879	0
Flt Permitted					0.967			0.983			0.980	
Satd. Flow (perm)	0	1547	0	0	1802	0	0	1108	0	0	1879	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	67%	0%	0%	0%	0%	17%	0%	90%	0%	0%	0%
Adj. Flow (vph)	0	4	23	21	3	7	17	4	28	30	44	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	27	0	0	31	0	0	49	0	0	75	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	3	16	15	2	5	12	3	20	21	31	1
Future Volume (vph)	0	3	16	15	2	5	12	3	20	21	31	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	4	23	21	3	7	17	4	28	30	44	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	27	31	49	75
Volume Left (vph)	0	21	17	30
Volume Right (vph)	23	7	28	1
Hadj (s)	-0.34	0.00	0.70	0.07
Departure Headway (s)	3.9	4.2	4.8	4.2
Degree Utilization, x	0.03	0.04	0.07	0.09
Capacity (veh/h)	893	825	730	850
Control Delay (s)	7.0	7.4	8.1	7.5
Approach Delay (s)	7.0	7.4	8.1	7.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.6			
Level of Service	A			
Intersection Capacity Utilization	18.5%	ICU Level of Service	A	
Analysis Period (min)	15			

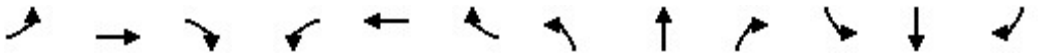
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	279	0	0	202	0	0
Future Volume (vph)	279	0	0	202	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1795	0	0	1847	1921	0
Flt Permitted						
Satd. Flow (perm)	1795	0	0	1847	1921	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	0%	0%	4%	0%	0%
Adj. Flow (vph)	294	0	0	213	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	294	0	0	213	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	279	0	0	202	0	0
Future Volume (Veh/h)	279	0	0	202	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	294	0	0	213	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)	184					
pX, platoon unblocked						
vC, conflicting volume			294		507	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			294		507	294
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)			1279		529	750

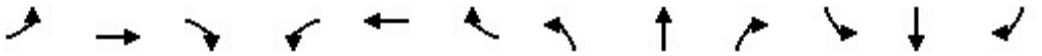
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	294	213	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1279	1700
Volume to Capacity	0.17	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		18.0%	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	0	3	3	0	1	1	38	0	0	66	0
Future Volume (vph)	0	0	3	3	0	1	1	38	0	0	66	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		0.865			0.973							
Flt Protected					0.962			0.999				
Satd. Flow (prot)	0	1662	0	0	1798	0	0	1247	0	0	1921	0
Flt Permitted					0.962			0.999				
Satd. Flow (perm)	0	1662	0	0	1798	0	0	1247	0	0	1921	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	4	4	0	1	1	48	0	0	83	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	5	0	0	49	0	0	83	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 13.5%		ICU Level of Service A	
Analysis Period (min) 15			

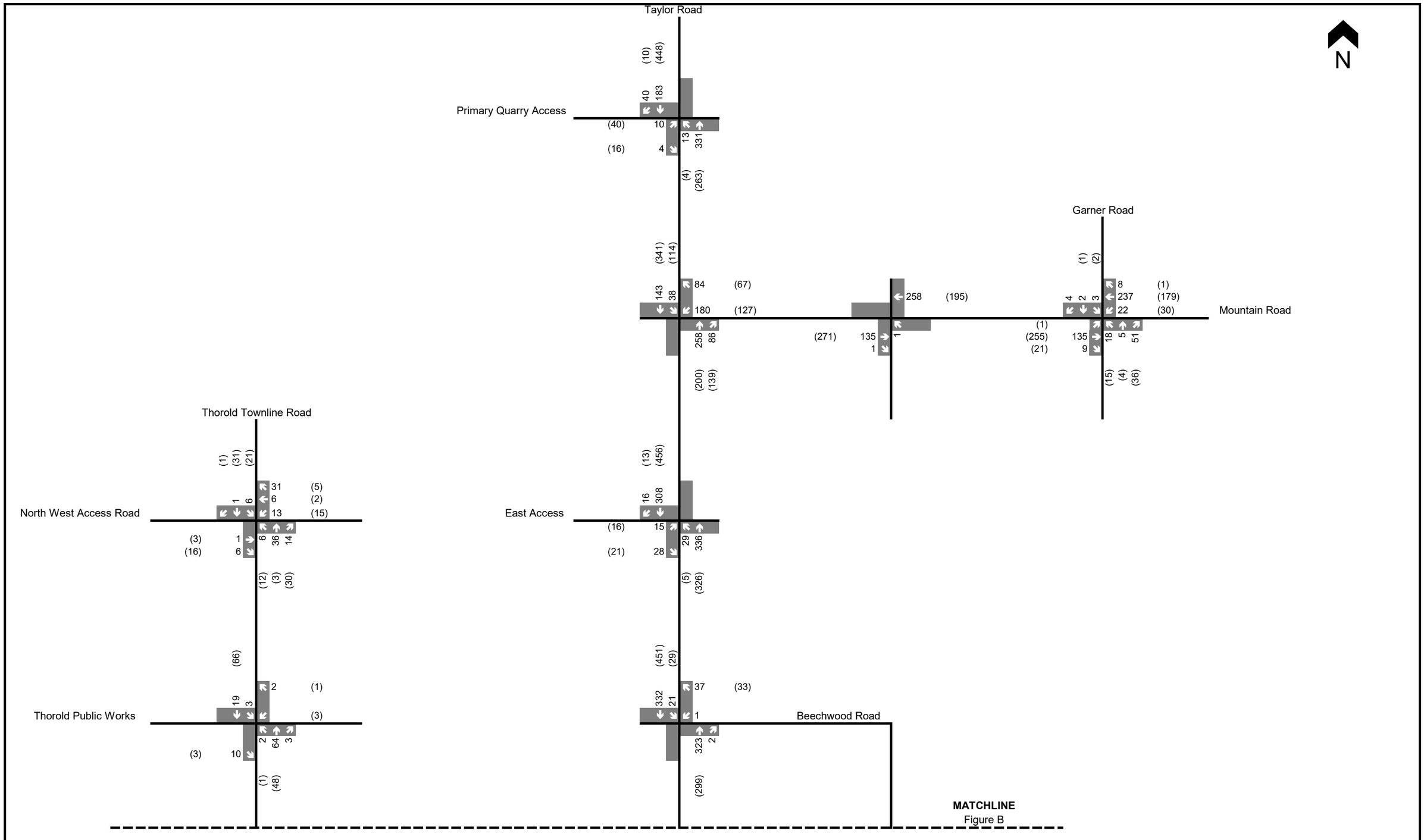


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	3	3	0	1	1	38	0	0	66	0
Future Volume (Veh/h)	0	0	3	3	0	1	1	38	0	0	66	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	4	4	0	1	1	48	0	0	82	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	133	132	82	136	132	48	82			48		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	133	132	82	136	132	48	82			48		
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)	842	762	983	836	762	1027	1528			1572		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	5	49	82
Volume Left	0	4	1	0
Volume Right	4	1	0	0
cSH	983	868	1528	1572
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length 95th (m)	0.1	0.1	0.0	0.0
Control Delay (s)	8.7	9.2	0.2	0.0
Lane LOS	A	A	A	
Approach Delay (s)	8.7	9.2	0.2	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	13.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix B:
Future Total Conditions Traffic Volumes



Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

FT H1 Traffic Volume A

MATCHLINE
Figure A

N

Old Thorold Stone Road

Taylor Road

Thorold Townline Road

Taylor Road

Thorold Stone Road

Thorold Townline Road

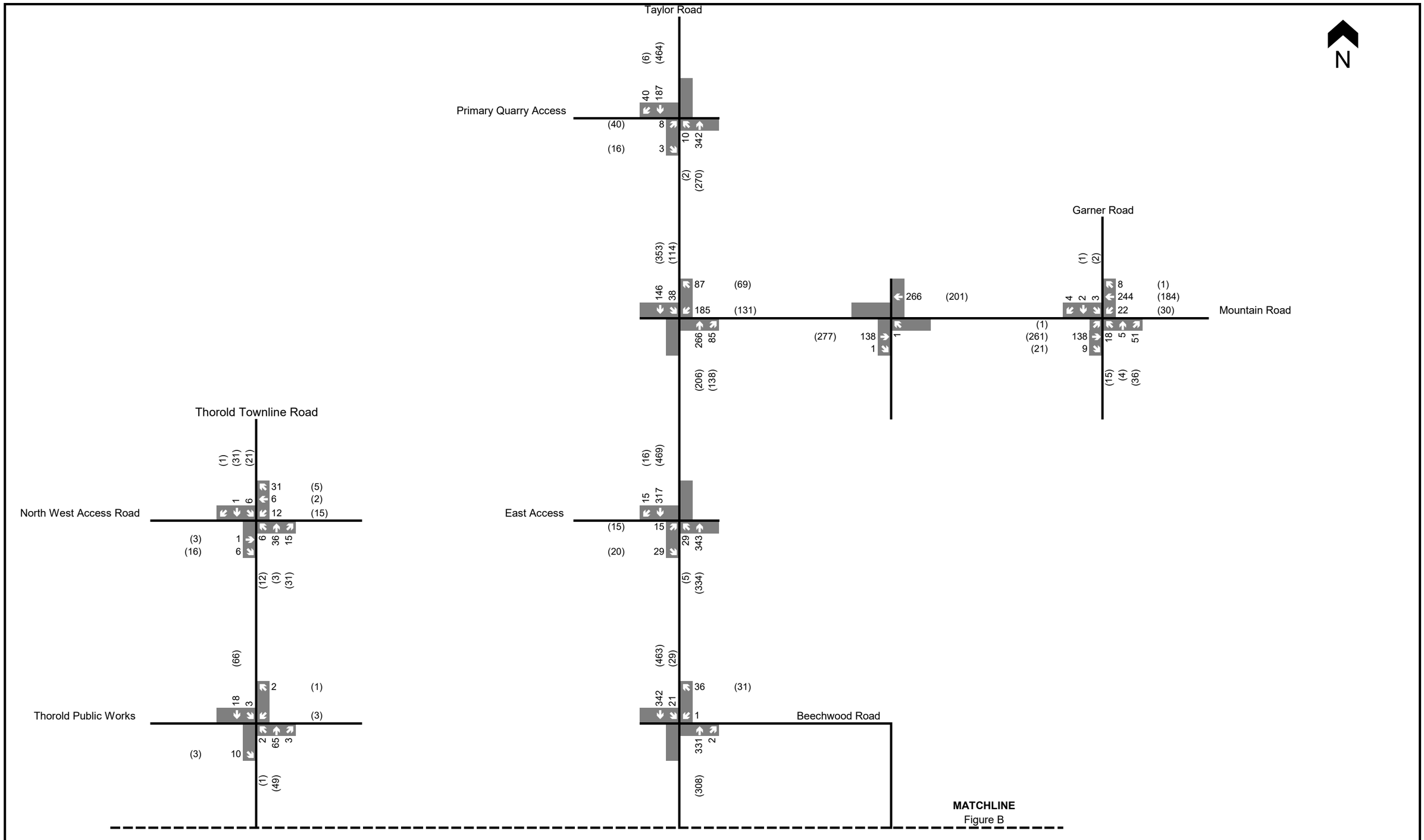
9

Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

FT H1 Traffic Volume B



Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

FT H2 Traffic Volume A

MATCHLINE
Figure A

N

Old Thorold Stone Road

Taylor Road

Thorold Townline Road

Taylor Road

Thorold Stone Road

Thorold Townline Road

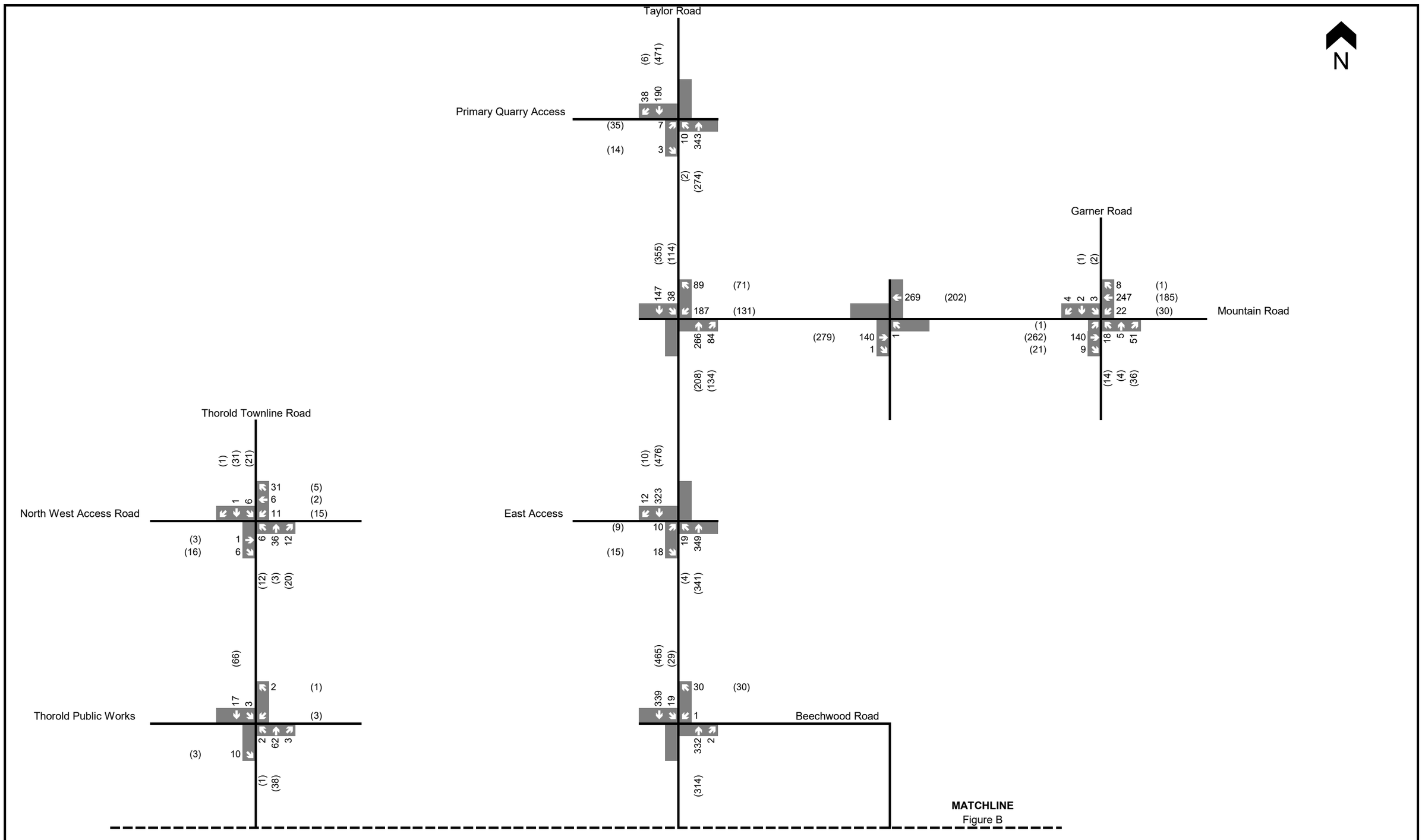
Beechwood Road

Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

FT H2 Traffic Volume B



Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

FT H3 Traffic Volume A

MATCHLINE
Figure A

N

Old Thorold Stone Road

Taylor Road

Thorold Townline Road

Taylor Road

Thorold Stone Road

Thorold Townline Road

Beechwood Road

Legend

xx A.M. Peak Hour Traffic
(xx) P.M. Peak Hour Traffic

TYLin

FT H3 Traffic Volume B

Appendix C:
Collision Assessment

Formulas Applied

Table 5.14 Crash Modification Factors[a] (*CMFs*) for Lane Width on Roadway Segments

Roadway Type	*Lane Width*	*Average Annual Daily Traffic (AADT) (veh/day)* < 400	400 to 2000	>2000	*Equation Number*
Rural Two-Lane[a]	2.7 m or less	1.05	$1.05 + 2.81 \times 10^{-4}(AADT - 400)$	1.50	5.2
	3 m	1.02	$1.02 + 1.75 \times 10^{-4}(AADT - 400)$	1.30	5.3
	3.3 m	1.01	$1.01 + 2.5 \times 10^{-5}(AADT - 400)$	1.05	5.4
	3.6 m or more	1.00	1.00	1.00	5.5
Undivided Rural Multilane[b]	2.7 m or less	1.04	$1.04 + 2.13 \times 10^{-4}(AADT - 400)$	1.38	5.6
	3 m	1.02	$1.02 + 1.31 \times 10^{-4}(AADT - 400)$	1.23	5.7
	3.3 m	1.01	$1.01 + 1.88 \times 10^{-5}(AADT - 400)$	1.04	5.8
	3.6 m or more	1.00	1.00	1.00	5.9
Divided Rural Multilane[c]	2.7 m or less	1.03	$1.03 + 1.38 \times 10^{-4}(AADT - 400)$	1.25	5.10
	3 m	1.01	$1.01 + 8.75 \times 10^{-5}(AADT - 400)$	1.15	5.11
	3.3 m	1.01	$1.01 + 1.25 \times 10^{-5}(AADT - 400)$	1.03	5.12
	3.6 m or more	1.00	1.00	1.00	5.13

[a]Note: The collision types related to lane width to which these *CMFs* apply are single-vehicle run-off-the-road and multiple-vehicle head-on, opposite direction sideswipe, and same direction sideswipe crashes.
[b]Note: Standard error of *CMF* is unknown.
[c]Note: To determine the *CMF* for changing lane width and/or *AADT*, divide the "new" condition *CMF* by the "existing" condition *CMF*.
SOURCE: Based on *Highway Safety Manual*, 1st Edition, 2010, AASHTO, Washington, D.C.

$$CMF_{lr} = (CMF_{ra} - 1)p_{ra} + 1.0 \quad (5.14)$$

where

CMF_{lr} = crash modification for the effect of lane width on total crashes.
CMF_{ra} = crash modification for the effect of lane width on single-vehicle run-off-the-road and/or related crashes on two-lane roads.
p_{ra} = proportion of total crashes constituted by single-vehicle run-off-the-road and/or related crashes on two-lane roads. HSM default value is 0.574, but a value based on actual local data is preferable when available.

Table 5.16 Safety Performance Functions for Rural Roadway Segments

Roadway Segment Type	*SPF*[c]	*Overdispersion Parameter (k)*	*Equation #*
Rural two-lane, two-way roadways[1,4]	$N_{spfra} = (AADT) \times (L) \times (365) \times (10^{-6}) \times (e^{-0.312})$	0.236/L	5.17
Undivided rural multilane roadways[2,5,7]	$N_{spfru} = e^{(a+(b)\times(\ln AADT)+\ln L)}$	$k = \frac{1}{e^{(c+\ln(L))}}$	5.18
Divided rural multilane roadway segments[3,6,8]	$N_{spfru} = e^{(a+(b)\times(\ln AADT)+\ln L)}$	$k = \frac{1}{e^{(c+\ln(L))}}$	5.19

Note: SPF[c] gives the value of $N_{sp,i}$ which is the predicted total crash frequency for road segment *i*
L = length of segment, km
a, *b*, *c* = regression parameters (see Tables 5.18 and 5.19)
[1]Base conditions for roadway segments on rural two-lane, two-way roads are
Lane width (LW) = 3.6 m
Shoulder width (SW) = 1.8 m
Shoulder type paved
[2]Base conditions for undivided rural four-lane roadway segments are
Lane width (LW) = 3.6 m
Shoulder width (SW) = 1.8 m
Shoulder type paved
Sideslopes = 1V:7H or flatter
Lighting None
Automated speed enforcement None
[3]Base conditions for divided rural multilane roadway segments are
Lane width (LW) = 3.6 m
Shoulder width (SW) = 2.4 m
Median width = 9 m
Lighting None
Automated speed enforcement None
[4]*AADT* range for rural two-lane roadways is from zero to 17,800 veh/day.
[5]*AADT* range for undivided rural four-lane roadways is from zero to 33,200 veh/day.
[6]*AADT* range for divided rural four-lane roadways is from zero to 89,300 veh/day.
[7]See Table 5.18 for values of *a*, *b*, and *c* in Eq. 5.18 for undivided rural multilane segments.
[8]See Table 5.19 for values of *a*, *b*, and *c* in Eq. 5.19 for undivided rural multilane segments.
SOURCE: Based on *Highway Safety Manual*, 1st Edition, 2010, AASHTO, Washington, D.C.

Table 5.18 SPF Coefficients for Total and Fatal-and-Injury Crashes on Undivided Roadway Segments (for Use in Equation 5.18)

Crash Severity Level	*a*	*b*	*c*
4-lane total	−9.653	1.176	1.675
4-lane fatal and injury	−9.410	1.094	1.796
4-lane fatal and injury[a]	−8.577	0.938	2.003

[a] Using KABCO scale, these include only KAB crashes. Crashes with severity level C (possible injury) are not included.
SOURCE: Based on *Highway Safety Manual*, 1st Edition, 2010, AASHTO, Washington, D.C.

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Equations

Empirical Bayes Weights

$$w_{total} = \frac{1}{1 + k_{total} \times \sum_{n=1}^{Y} N_{predicted,n(total)}} \quad \text{or} \tag{5.39}$$

$$w_{FI} = \frac{1}{1 + k_{FI} \times \sum_{n=1}^{Y} N_{predicted,n(FI)}} \tag{5.40}$$

where

w_{total} = empirical Bayes weight for total crashes
w_{FI} = empirical Bayes weight for fatal and injury crashes
k_{FI} = overdispersion parameter for fatal and injury crashes
k_{total} = overdispersion parameter for total crashes
$N_{predicted,n(FI)}$ = predicted average fatal and injury crash frequency in year n from SPF
$N_{predicted,n(total)}$ predicted average total crash frequency in year n from SPF

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Equations (Continued)

Expected Crash Frequency

$$N_{expected,1(total)} = (w_{total}) \times N_{predicted,1(total)} + (1 - w_{total}) \times \left[\frac{\sum_{n=1}^{Y} N_{observed,y(total)}}{\sum_{n=1}^{Y} C_{n(total)}} \right] \quad (5.41)$$

$$N_{expected,1(FI)} = (w_{total}) \times N_{predicted,1(FI)} + (1 - w_{FI}) \times \left[\frac{\sum_{n=1}^{Y} N_{observed,y(FI)}}{\sum_{n=1}^{Y} C_{n(FI)}} \right] \quad (5.42)$$

where

$N_{expected1,(FI)}$ = EB-adjusted estimated average crash frequency for year
$N_{expected1,(total)}$ = EB-adjusted estimated average crash frequency for year
w_{total} = empirical Bayes weight for total crashes
w_{FI} = empirical Bayes weight for fatal and injury crashes
$N_{observed,\ n(FI)}$ = observed fatal and injury crash frequency in year n
$N_{observed,\ n(total)}$ = observed average total crash frequency in year n
$N_{predicted,\ n(FI)}$ = predicted average fatal and injury crash frequency in year n from SPF
$N_{predicted,\ n(total)}$ = predicted average total crash frequency in year n from SPF
$C_{n(total)}$ = annual correction factor for total crashes in year n
$C_{n(FI)}$ = annual correction factor for fatal crashes in year n
n = year
Y = final year

Type of Lane	CMF for Number of Approaches with Exclusive Turn Lane(s)			
	1	2	3	4
LT Lane(s)	0.90	0.81	0.73	0.66
RT Lane(s)	0.96	0.92	0.88	0.85

Type of LT Phasing	CMF for Number of Approaches w/LT Phasing			
	1	2	3	4
Permitted	1.00	1.00	1.00	1.00
Protected + Permitted, or Permitted + Protected	0.99	0.98	0.97	0.96
Protected	0.94	0.88	0.83	0.78

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2025

Road:	Garner Road Between Reta Street & Swart Street	
AADT	784	
Length (km)	2.31	
Two-way roadways		
AADT	784	
Length (miles)	1.44	
Predicted total crash frequency	0.301	Total collision/year
Overdispersion Parameter	0.164417879	
Lane width	3 m	
Shoulder	0.6 m	
Type of shoulder	Earth Shoulder	
Adjustment		
CMF Lane width	1.0500528	
CMF Shouder	1.094471488	
Predicted total crash frequency	0.346	Total collision/year
Expected Collisions		
2020	1	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	2	
Weight	0.946242497	
Expected Total Crash Frequency	0.348459555	Total collision/year

2031

Road:	Garner Road Between Reta Street & Swart Street	
AADT	784	
Length (km)	2.31	
Two-way roadways		
AADT	784	
Length (miles)	1.44	
Predicted total crash frequency	0.301	Total collision/year
Overdispersion Parameter	0.164417879	
Lane width	3 m	
Shoulder	0.6 m	
Type of shoulder	Earth Shoulder	
Adjustment		
CMF Lane width	1.0500528	
CMF Shouder	1.094471488	
Predicted total crash frequency	0.346	Total collision/year
Expected Collisions		
2020	1	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	2	
Weight	0.946242497	
Expected Total Crash Frequency	0.348459555	Total collision/year

2036

Road:	Garner Road Between Reta Street & Swart Street	
AADT	784	
Length (km)	2.31	
Two-way roadways		
AADT	784	
Length (miles)	1.44	
Predicted total crash frequency	0.301	Total collision/year
Overdispersion Parameter	0.164417879	
Lane width	3 m	
Shoulder	0.6 m	
Type of shoulder	Earth Shoulder	
Adjustment		
CMF Lane width	1.0500528	
CMF Shouder	1.094471488	
Predicted total crash frequency	0.346	Total collision/year
Expected Collisions		
2020	1	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	2	
Weight	0.946242497	
Expected Total Crash Frequency	0.348459555	Total collision/year

TYLin

2025

Road:	**Garner Road & Mountain Road**
	Data
Major	
AADT	3584
Minor	
AADT	784
Intersection Type - Unsignalized	Four-leg stop-controlled intersections on rural two-lane two-way roads
Predicted total crash frequency	1.515629 Collision Year
Overdispersion Parameter	0.24

Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	0	1
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	1.380283	
Expected Unsignalized Collisions		
2020	1	
2021	0	
2022	0	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.751164	
Expected Total Craash Frequency	1.086586 Total collision/year	

2031

Road:	**Garner Road & Mountain Road**
	Data
Major	
AADT	3804
Minor	
AADT	784
Intersection Type - Unsignalized	Four-leg stop-controlled intersections on rural two-lane two-way roads
Predicted total crash frequency	1.57078 Collision Year
Overdispersion Parameter	0.24

Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	0	1
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	1.43051	
Expected Unsignalized Collisions		
2020	1	
2021	0	
2022	0	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.74442	
Expected Total Craash Frequency	1.11602 Total collision/year	

2036

Road:	**Garner Road & Mountain Road**
	Data
Major	
AADT	3999
Minor	
AADT	784
Intersection Type - Unsignalized	Four-leg stop-controlled intersections on rural two-lane two-way roads
Predicted total crash frequency	1.61861 Collision Year
Overdispersion Parameter	0.24

Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	0	1
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	1.47407	
Expected Unsignalized Collisions		
2020	1	
2021	0	
2022	0	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.73867	
Expected Total Craash Frequency	1.14112 Total collision/year	

TYLin

2025

Road:	Taylor Road between Mountain Road & Beechwood Road	
AADT	5804	
Length (km)	1.3	
Two-way roadways		
AADT	5804	
Length (miles)	0.81	
Predicted total crash frequency	1.253	Total collision/year
Overdispersion Parameter	0.292157924	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	1.209	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	1	
2024	0	
Total Collisions	2	
Weight	0.739036136	
Expected Total Crash Frequency	0.997614317	Total collision/year

2031

Road:	Taylor Road between Mountain Road & Beechwood Road	
AADT	6161	
Length (km)	1.3	
Two-way roadways		
AADT	6161	
Length (miles)	0.81	
Predicted total crash frequency	1.330	Total collision/year
Overdispersion Parameter	0.292157924	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	1.283	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	1	
2024	0	
Total Collisions	2	
Weight	0.727360756	
Expected Total Crash Frequency	1.042247036	Total collision/year

2036

Road:	Taylor Road between Mountain Road & Beechwood Road	
AADT	6475	
Length (km)	1.3	
Two-way roadways		
AADT	6475	
Length (miles)	0.81	
Predicted total crash frequency	1.397	Total collision/year
Overdispersion Parameter	0.292157924	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	1.348	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	1	
2024	0	
Total Collisions	2	
Weight	0.717392399	
Expected Total Crash Frequency	1.080354135	Total collision/year

TYLin

2025

Road:	**Taylor Road & Beechwood Road**	
	Data	
Major		
AADT	5800	
Minor		
AADT	396	
Intersection Type - Unsignalized	Three-leg stop-controlled intersections on rural two-lane two-way roads	
Predicted total crash frequency	0.9201	Collision Year
Overdispersion Parameter	0.54	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	1	0.9
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	0.75414	
Expected Unsignalized Collisions		
2020	0	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.71061	
Expected Total Craash Frequency	0.59378	Total collision/year

2031

Road:	**Taylor Road & Beechwood Road**	
	Data	
Major		
AADT	6161	
Minor		
AADT	396	
Intersection Type - Unsignalized	Three-leg stop-controlled intersections on rural two-lane two-way roads	
Predicted total crash frequency	0.96505	Collision Year
Overdispersion Parameter	0.54	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	1	0.9
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	0.79099	
Expected Unsignalized Collisions		
2020	0	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.70071	
Expected Total Craash Frequency	0.61411	Total collision/year

2036

Road:	**Taylor Road & Beechwood Road**	
	Data	
Major		
AADT	6475	
Minor		
AADT	396	
Intersection Type - Unsignalized	Three-leg stop-controlled intersections on rural two-lane two-way roads	
Predicted total crash frequency	1.00371	Collision Year
Overdispersion Parameter	0.54	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	1	0.9
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	0.82267	
Expected Unsignalized Collisions		
2020	0	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.69241	
Expected Total Craash Frequency	0.63114	Total collision/year

TYLin

2025

Road:	**Taylor Road & Mountain Road**
	Data
Major	
AADT	5604
Minor	
AADT	3300

Intersection Type - Signalized	Four-leg signalized intersections on rural two-lane two-way roads	
Predicted total crash frequency	5.30727	Collision Year
Overdispersion Parameter	0.11	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	2	0.81
Number of Approaches with Exclusive Right Turn Lanes	0	1
Type of Left Turn Phasing	Protec+Perm	
Number of Approaches with Left Turn Phasing	1	
CMF	0.99	
Number of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	3.87585	
Expected Signalized Collisions		
2020	1	
2021	1	
2022	1	
2023	1	
2024	0	
Total Collisions	4	
Weight	0.70109	
Expected Total Craash Frequency	2.95646	Total collision/year

2031

Road:	**Taylor Road & Mountain Road**
	Data
Major	
AADT	5949
Minor	
AADT	3503

Intersection Type - Signalized	Four-leg signalized intersections on rural two-lane two-way roads	
Predicted total crash frequency	5.56703	Collision Year
Overdispersion Parameter	0.11	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	2	0.81
Number of Approaches with Exclusive Right Turn Lanes	0	1
Type of Left Turn Phasing	Protec+Perm	
Number of Approaches with Left Turn Phasing	1	
CMF	0.99	
Number of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	4.06555	
Expected Signalized Collisions		
2020	1	
2021	1	
2022	1	
2023	1	
2024	0	
Total Collisions	4	
Weight	0.69098	
Expected Total Craash Frequency	3.05644	Total collision/year

2036

Road:	**Taylor Road & Mountain Road**
	Data
Major	
AADT	6252
Minor	
AADT	3682

Intersection Type - Signalized	Four-leg signalized intersections on rural two-lane two-way roads	
Predicted total crash frequency	5.79292	Collision Year
Overdispersion Parameter	0.11	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	2	0.81
Number of Approaches with Exclusive Right Turn Lanes	0	1
Type of Left Turn Phasing	Protec+Perm	
Number of Approaches with Left Turn Phasing	1	
CMF	0.99	
Number of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	4.23051	
Expected Signalized Collisions		
2020	1	
2021	1	
2022	1	
2023	1	
2024	0	
Total Collisions	4	
Weight	0.68243	
Expected Total Craash Frequency	3.14108	Total collision/year

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2025

Road:	Taylor Road between Beechwood Road & Thorold Townline Road	
AADT	5448	
Length (km)	1	
Two-way roadways		
AADT	5448	
Length (miles)	0.62	
Predicted total crash frequency	0.904	Total collision/year
Overdispersion Parameter	0.379805302	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	0.873	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.751058131	
Expected Total Crash Frequency	0.705234384	Total collision/year

2031

Road:	Taylor Road between Beechwood Road & Thorold Townline Road	
AADT	5783	
Length (km)	1	
Two-way roadways		
AADT	5783	
Length (miles)	0.62	
Predicted total crash frequency	0.960	Total collision/year
Overdispersion Parameter	0.379805302	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	0.926	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.739734607	
Expected Total Crash Frequency	0.73731311	Total collision/year

2036

Road:	Taylor Road between Beechwood Road & Thorold Townline Road	
AADT	6078	
Length (km)	1	
Two-way roadways		
AADT	6078	
Length (miles)	0.62	
Predicted total crash frequency	1.009	Total collision/year
Overdispersion Parameter	0.379805302	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	0.974	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	0	
2024	0	
Total Collisions	1	
Weight	0.730042165	
Expected Total Crash Frequency	0.764771099	Total collision/year

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2025

Road:	Taylor Road between Mountain Road & Beechwood Road	
AADT	5804	
Length (km)	1.3	
Two-way roadways		
AADT	5804	
Length (miles)	0.81	
Predicted total crash frequency	1.253	Total collision/year
Overdispersion Parameter	0.292157924	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	1.209	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	1	
2024	0	
Total Collisions	2	
Weight	0.739036136	
Expected Total Crash Frequency	0.997614317	Total collision/year

2031

Road:	Taylor Road between Mountain Road & Beechwood Road	
AADT	6161	
Length (km)	1.3	
Two-way roadways		
AADT	6161	
Length (miles)	0.81	
Predicted total crash frequency	1.330	Total collision/year
Overdispersion Parameter	0.292157924	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	1.283	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	1	
2024	0	
Total Collisions	2	
Weight	0.727360756	
Expected Total Crash Frequency	1.042247036	Total collision/year

2036

Road:	Taylor Road between Mountain Road & Beechwood Road	
AADT	6475	
Length (km)	1.3	
Two-way roadways		
AADT	6475	
Length (miles)	0.81	
Predicted total crash frequency	1.397	Total collision/year
Overdispersion Parameter	0.292157924	
Lane width	3.6 m or more	
Shoulder	2.4 m or more	
Type of shoulder	Paved	
Adjustment		
CMF Lane width	1	
CMF Shouder	0.9649	
Predicted total crash frequency	1.348	Total collision/year
Expected Collisions		
2020	0	
2021	0	
2022	1	
2023	1	
2024	0	
Total Collisions	2	
Weight	0.717392399	
Expected Total Crash Frequency	1.080354135	Total collision/year

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2025

Road:	**Thorold Stone Road & Beechwood Road**
	Data
Major	
Peak AM Volume	
Peak PM Volume	
AADT	14188
Minor	
AADT	396
Intersection Type - Unsignalized	Four-leg stop control (4ST)Total
Predicted total crash frequency	2.1786 Collision Year
Overdispersion Parameter	0.494

Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	0	1
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	1.98405	

Expected Unsignalized Collisions	
2020	2
2021	2
2022	1
2023	0
2024	0
Total Collisions	5
Weight	0.50502
Expected Total Craash Frequency	1.49696 Total collision/year

2031

Road:	**Thorold Stone Road & Beechwood Road**
	Data
Major	
Peak AM Volume	
Peak PM Volume	
AADT	15978
Minor	
AADT	396
Intersection Type - Unsignalized	Four-leg stop control (4ST)Total
Predicted total crash frequency	2.409546 Collision Year
Overdispersion Parameter	0.494

Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	0	1
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	2.194374	

Expected Unsignalized Collisions	
2020	2
2021	2
2022	1
2023	0
2024	0
Total Collisions	5
Weight	0.479842
Expected Total Craash Frequency	1.57311 Total collision/year

2036

Road:	**Thorold Stone Road & Beechwood Road**
	Data
Major	
Peak AM Volume	
Peak PM Volume	
AADT	17546
Minor	
AADT	396
Intersection Type - Unsignalized	Four-leg stop control (4ST)Total
Predicted total crash frequency	2.60862 Collision Year
Overdispersion Parameter	0.494

Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	0	1
Number of Approaches with Exclusive Right Turn Lanes	0	1
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Unsignalized	2.37567	

Expected Unsignalized Collisions	
2020	2
2021	2
2022	1
2023	0
2024	0
Total Collisions	5
Weight	0.46007
Expected Total Craash Frequency	1.63291 Total collision/year

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2025

Road:	**Thorold Stone Road & Garner Road**	
	Data	
Major		
AADT	17044	
Minor		
AADT	6164	
Intersection Type - Signalized	Four-leg signalized intersections on rural multilane highwaysTotal Crashes	
Predicted total crash frequency	16.3409	Collision Year
Overdispersion Parameter	0.277	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	4	0.66
Number of Approaches with Exclusive Right Turn Lanes	2	0.92
Type of Left Turn Phasing	Permitted	
Number of Approaches with Left Turn Phasing	1	
CMF	1	
Number of intersection approaches that prohibit right turn on red (RTOR)	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	9.03613	
Expected Signalized Collisions		
2020	2	
2021	6	
2022	2	
2023	0	
2024	0	
Total Collisions	10	
Weight	0.28547	
Expected Total Craash Frequency	4.0086	Total collision/year

2031

Road:	**Thorold Stone Road & Garner Road**	
	Data	
Major		
AADT	19194	
Minor		
AADT	6164	
Intersection Type - Signalized	Four-leg signalized intersections on rural multilane highwaysTotal Crashes	
Predicted total crash frequency	17.8044	Collision Year
Overdispersion Parameter	0.277	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	4	0.66
Number of Approaches with Exclusive Right Turn Lanes	2	0.92
Type of Left Turn Phasing	Permitted	
Number of Approaches with Left Turn Phasing	1	
CMF	1	
Number of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	9.8454	
Expected Signalized Collisions		
2020	2	
2021	6	
2022	2	
2023	0	
2024	0	
Total Collisions	10	
Weight	0.2683	
Expected Total Craash Frequency	4.10492	Total collision/year

2036

Road:	**Thorold Stone Road & Garner Road**	
	Data	
Major		
AADT	21192	
Minor		
AADT	6164	
Intersection Type - Signalized	Four-leg signalized intersections on rural multilane highwaysTotal Crashes	
Predicted total crash frequency	19.1239	Collision Year
Overdispersion Parameter	0.277	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	4	0.66
Number of Approaches with Exclusive Right Turn Lanes	2	0.92
Type of Left Turn Phasing	Permitted	
Number of Approaches with Left Turn Phasing	1	
CMF	1	
Number of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	10.5751	
Expected Signalized Collisions		
2020	2	
2021	6	
2022	2	
2023	0	
2024	0	
Total Collisions	10	
Weight	0.2545	
Expected Total Craash Frequency	4.18235	Total collision/year

2025

Road:	**Thorold Stone Road & Taylor Road**	
	Data	
Major	WB	EB
Peak AM Volume		
Peak PM Volume		
AADT	17044	
Minor		
Peak AM Volume		
Peak PM Volume		
AADT	6164	
Intersection Type - Signalized	Four-leg signalized intersections on rural multilane highwaysTotal Crashes	
Predicted total crash frequency	16.34088	Collision Year
Overdispersion Parameter	0.277	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	4	0.66
Number of Approaches with Exclusive Right Turn Lanes	2	0.92
Type of Left Turn Phasing	Permitted	
Number of Approaches with Left Turn Phasing	1	
CMF	1	
Number of intersection approaches that prohibit right turn on red (RTOR)	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	

2031

Road:	**Thorold Stone Road & Taylor Road**	
	Data	
Major	WB	EB
Peak AM Volume		
Peak PM Volume		
AADT	19194	
Minor		
Peak AM Volume		
Peak PM Volume		
AADT	6543	
Intersection Type - Signalized	Four-leg signalized intersections on rural multilane highwaysTotal Crashes	
Predicted total crash frequency	18.166	Collision Year
Overdispersion Parameter	0.277	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	4	0.66
Number of Approaches with Exclusive Right Turn Lanes	2	0.92
Type of Left Turn Phasing	Permitted	
Number of Approaches with Left Turn Phasing	1	
CMF	1	
er of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	10.0454	
Expected Signalized Collisions		
2020	9	
2021	6	
2022	5	
2023	8	
2024	0	
Total Collisions	28	
Weight	0.26437	
Expected Total Crash Frequency	6.77523	Total collision/year

2036

Road:	**Thorold Stone Road & Taylor Road**	
	Data	
Major	WB	EB
Peak AM Volume		
Peak PM Volume		
AADT	21192	
Minor		
Peak AM Volume		
Peak PM Volume		
AADT	6877	
Intersection Type - Signalized	Four-leg signalized intersections on rural multilane highwaysTotal Crashes	
Predicted total crash frequency	19.8425	Collision Year
Overdispersion Parameter	0.277	
Adjustment		CMF
Number of Approaches with Exclusive Left Turn Lanes	4	0.66
Number of Approaches with Exclusive Right Turn Lanes	2	0.92
Type of Left Turn Phasing	Permitted	
Number of Approaches with Left Turn Phasing	1	
CMF	1	
Number of intersection approaches that prohibit right turn on red (RTOR	0	
CMF	1	
Intersection Light	Yes	
CMF for intersection lighting	0.9107	
Predicted total crash frequency - Signalized	10.9725	
Expected Signalized Collisions		
2020	9	
2021	6	
2022	5	
2023	8	
2024	0	
Total Collisions	28	
Weight	0.24756	
Expected Total Crash Frequency	6.93002	Total collision/year

TYLin

2025

Road:	Thorold Townline Road btwn Dead End & Old Thorold Stone Road	
AADT	912	
Length (km)	1.33	
Two-way roadways		
AADT	912	
Length (miles)	0.83	
Predicted total crash frequency	0.201	Total collision/year
Overdispersion Parameter	0.285567896	
Lane width	3.6 m or more	
Shoulder	1.2 m	
Type of shoulder	Earth Shoulder	
Adjustment		
CMF Lane width	1	
CMF Shouder	1.0739584	
Predicted total crash frequency	0.216	Total collision/year
Expected Collisions		
2020	0	
2021	1	
2022	2	
2023	0	
2024	0	
Total Collisions	3	
Weight	0.941834952	
Expected Total Crash Frequency	0.238581056	Total collision/year

2031

Road:	Thorold Townline Road btwn Dead End & Old Thorold Stone Road	
AADT	912	
Length (km)	1.33	
Two-way roadways		
AADT	912	
Length (miles)	0.83	
Predicted total crash frequency	0.201	Total collision/year
Overdispersion Parameter	0.285567896	
Lane width	3.6 m or more	
Shoulder	1.2 m	
Type of shoulder	Earth Shoulder	
Adjustment		
CMF Lane width	1	
CMF Shouder	1.0739584	
Predicted total crash frequency	0.216	Total collision/year
Expected Collisions		
2020	0	
2021	1	
2022	2	
2023	0	
2024	0	
Total Collisions	3	
Weight	0.941834952	
Expected Total Crash Frequency	0.238581056	Total collision/year

2036

Road:	Thorold Townline Road btwn Dead End & Old Thorold Stone Road	
AADT	912	
Length (km)	1.33	
Two-way roadways		
AADT	912	
Length (miles)	0.83	
Predicted total crash frequency	0.201	Total collision/year
Overdispersion Parameter	0.285567896	
Lane width	3.6 m or more	
Shoulder	1.2 m	
Type of shoulder	Earth Shoulder	
Adjustment		
CMF Lane width	1	
CMF Shouder	1.0739584	
Predicted total crash frequency	0.216	Total collision/year
Expected Collisions		
2020	0	
2021	1	
2022	2	
2023	0	
2024	0	
Total Collisions	3	
Weight	0.941834952	
Expected Total Crash Frequency	0.238581056	Total collision/year

TYLin

Appendix D:
Sightline Assessment

TYLin 380 Wellington Street West, Toronto, ON M5V 1E3

100482 - Walker Landfill EA TIS
Intersection Sight Distance - Primary Quarry Access

N

001

DATE
2025-05-06

TYLin 380 Wellington Street West, Toronto, ON M5V 1E3

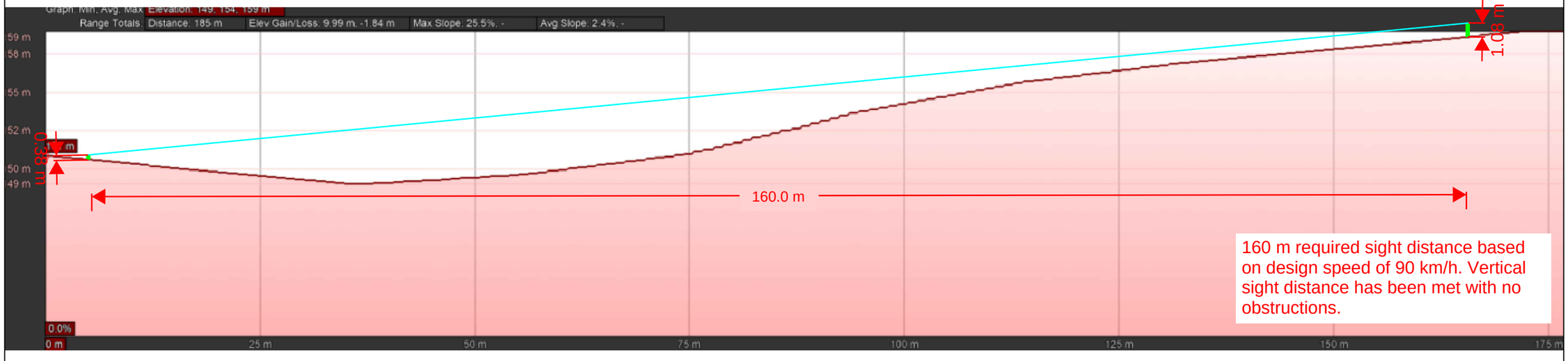
100482 - Walker Landfill EA TIS
Stopping Sight Distance - Horizontal

N

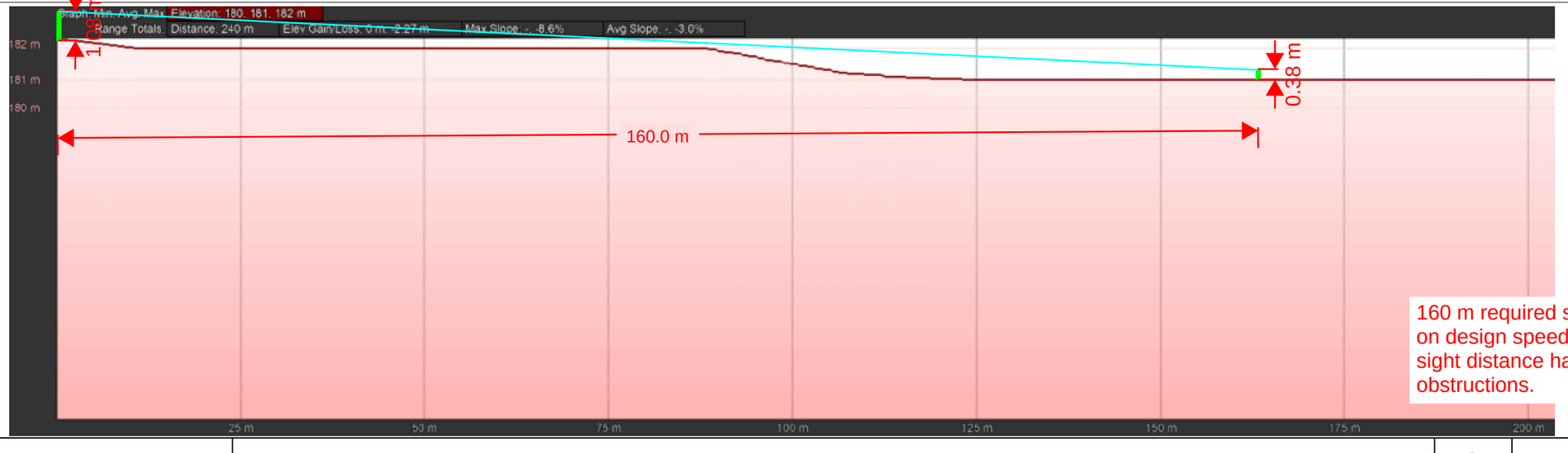
002

DATE
2025-05-06

TYLin 380 Wellington Street West, Toronto, ON M5V 1E3	100482 - Walker Landfill EA TIS Vertical Stopping Sight Distance - Primary Quarry Access (Northbound direction along Taylor Road)	N	003 DATE 2025-05-06

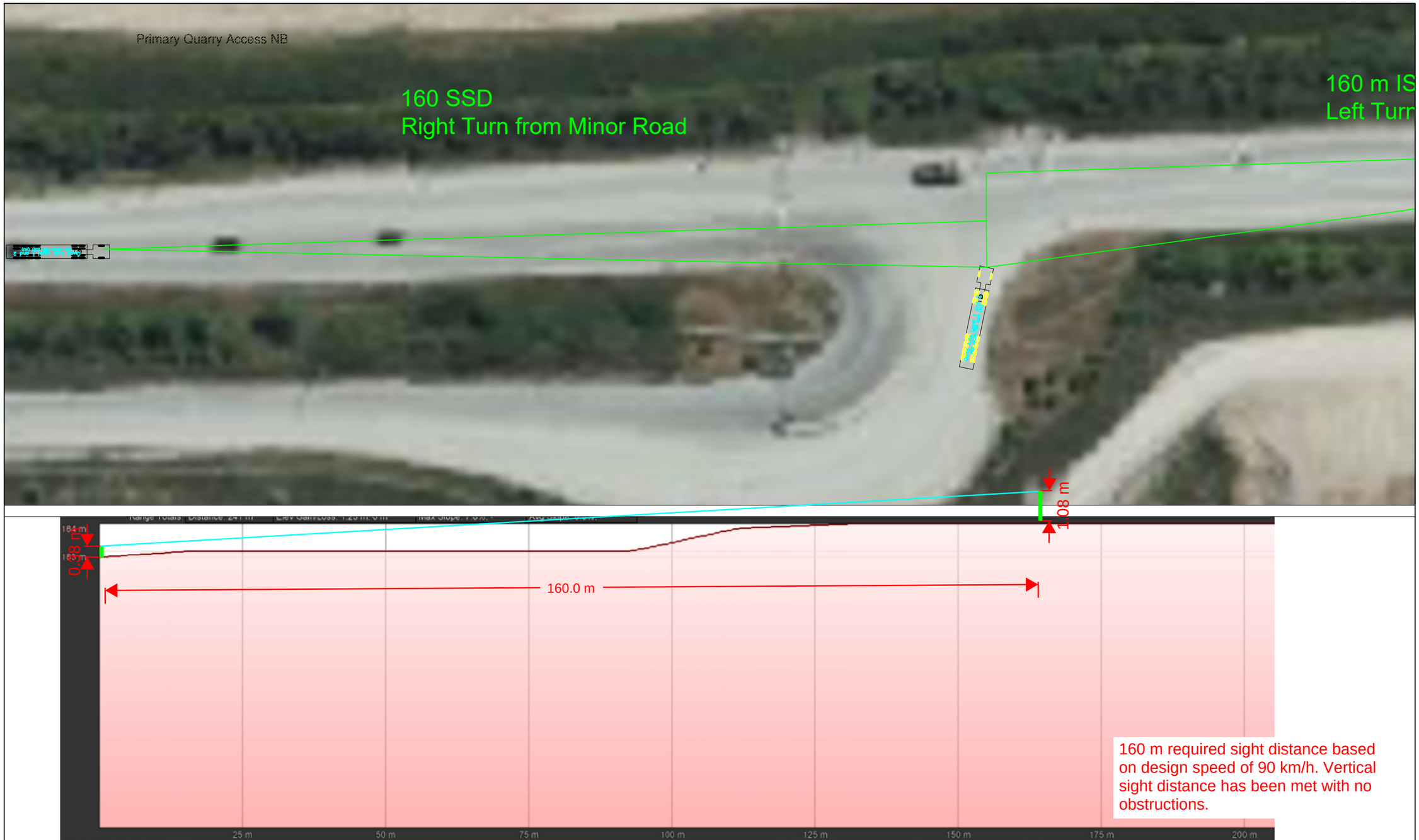


TYLin 380 Wellington Street West, Toronto, ON M5V 1E3	100482 - Walker Landfill EA TIS Vertical Stopping Sight Distance - Primary Quarry Access (Southbound direction along Taylor Road)	N	004 DATE 2025-05-06



160 m required sight distance based on design speed of 90 km/h. Vertical sight distance has been met with no obstructions.

TYLin 380 Wellington Street West, Toronto, ON M5V 1E3	100482 - Walker Landfill EA TIS Vertical Stopping Sight Distance - Landfill East Access (Northbound direction along Taylor Road)	N	005 DATE 2025-05-06



160 m required sight distance based on design speed of 90 km/h. Vertical sight distance has been met with no obstructions.

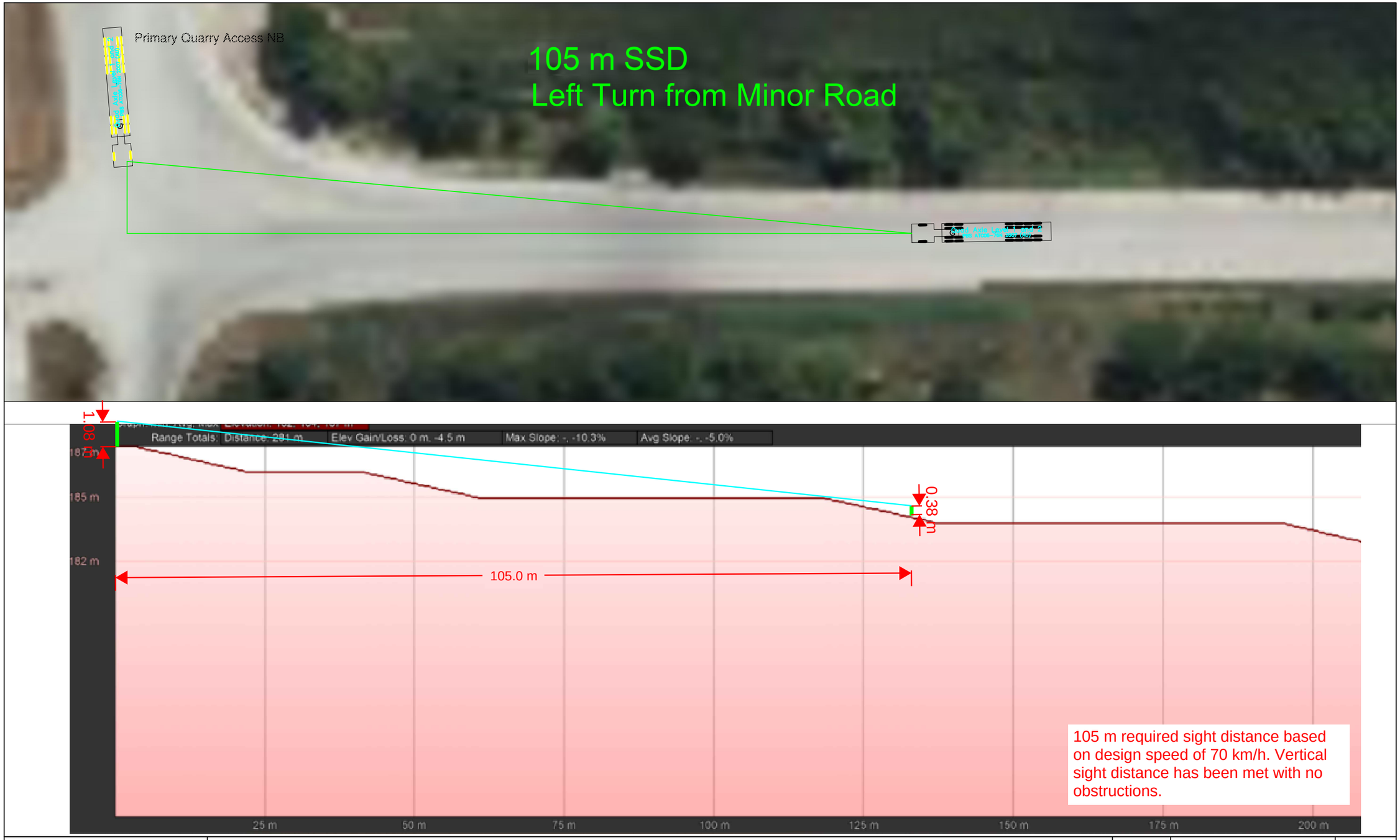
TYLin 380 Wellington Street West, Toronto, ON M5V 1E3

100482 - Walker Landfill EA TIS
Vertical Stopping Sight Distance - Landfill East Access (Southbound direction along Taylor Road)

N

006

DATE
2025-05-06



TYLin 380 Wellington Street West, Toronto, ON M5V 1E3

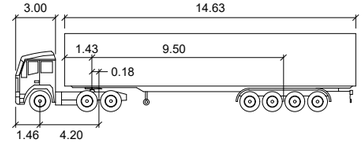
100482 - Walker Landfill EA TIS
Vertical Stopping Sight Distance - Landfill Northwest Access (Northbound direction along Taylor Road)

N

007

DATE 2025-05-06

Appendix E:
Vehicle Movement Diagrams



Quad Axle Level 1 and 2

meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 23.0
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

TYLin 380 Wellington Street West, Toronto, ON M5V 1E3

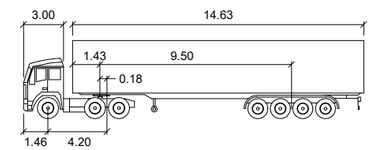
100482 - Walker Landfill EA TIS
Vehicle Movement Diagram

N

008

DATE
2025-05-06

PRIMARY QUARRY ACCESS



Quad Axle Level 1 and 2

meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 23.0
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

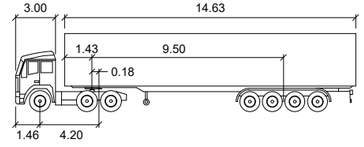
TYLin
380 Wellington Street West,
Toronto, ON
M5V 1E3

100482 - Walker Landfill EA TIS
Vehicle Movement Diagram

N

009

DATE
2025-05-06



Quad Axle Level 1 and 2

meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 23.0
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

TYLin
380 Wellington Street West,
Toronto, ON
M5V 1E3

100482 - Walker Landfill EA TIS
Vehicle Movement Diagram

N

010

DATE
2025-05-06

Appendix F:
Common Receptor Traffic Table

Receptor ID (See Map)	Location	Description	Relevant Road Segment	2028				2031				2034				2036			
				Baseline Conditions (with South Landfill Phase 1 and Quarry operation together and no South Landfill Phase 2)				Potential Impact 1 (with South Landfill Phase 1 being closed, Quarry and South Landfill Phase 2 operating together for short period of time)				Potential Impact 2 (with South Landfill Phase 2 operations and no Quarry)				Potential Impact 3 (South Landfill Phase 2 post closure)			
				AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles	AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles	AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles	AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles
CR01	Residences on Warner Road and the Niagara Escarpment	Located approximately 1094m from the proposed Waste Disposal Site Boundary Limits. Serves as representative of residences on Warner Road and the Niagara Escarpment.	Taylor Road - North of Taylor Road / Primary Quarry Access Road Intersection	42	100	26	100	24	100	25	100	22	100	24	100	13	100	14	100
CR04	Nearest residences on Garner Rd	Located approximately 550m from the proposed Waste Disposal Site Boundary Limits.Serves as representative of the residences on Garner Rd south of Mountain Rd and north of the transmission line that crosses Garner Rd north of Thorold Stone Rd.	Garner Road - North of Thorold Stone Road / Garner Road Intersection	2	100	1	100	0	100	2	100	0	100	2	100	0	100	1	100
CR05	Nearest residence, South	Located approximately 450m from the proposed Waste Disposal Site Boundary Limits.	Thorold Stone Road between Garner Road and Taylor Road	43	100	27	100	12	100	7	100	12	100	11	100	8	100	6	100
CR06	Nearest residences	Located approximately 2577m from the proposed	Not Applicable																
CR07	Nearest school: St. Vincent De Paul Catholic Elementary School	Located approximately 2005m southeast from the proposed Waste Disposal Site Boundary Limits.Serves as representative of an important public facility, a cluster of residences backing onto Kalar Road at Thorold Stone Road, commercial businesses at the corner of Kalar Road and Thorold Stone Road and the Shriner's Woodlot Park off Kalar Road.	Thorold Stone Road - East of Thorold Stone Road / Garner Road Intersection	45	100	27	100	9	100	10	100	8	100	10	100	5	100	6	100
CR08	Lakeview Cemetery	Located approximately 1197m west from the proposed Waste Disposal Site Boundary Limits. Serves to represent an important public institutional feature along Thorold Townline Road, used for outdoor public ceremonies and informal recreational activities.	Thorold Town Line Road - North of Thorold Townline Road & Thorold Public Works Access/Landf ill West Access Intersection	7	100	6	100	7	100	6	100	7	100	6	100	7	100	6	100
CR10	Niagara Thorold Patrol Yard / Niagara Regional Police Fleet Centre	Located approximately 1186m west from the proposed Waste Disposal Site Boundary Limits.Serves as representative of two public institutional facilities with outdoor components and industrial/commercial operations along Old Thorold Stone Road to the west and southwest.	Thorold Townline Road - South of Thorold Townline Road & Thorold Public Works Access/Landfill West Access Intersection	10	100	8	100	10	100	8	100	10	100	8	100	10	100	8	100
CR11	Woodend Conservation Area	Located approximately 1295m north from the proposed Waste Disposal Site Boundary Limits. Serves as representative of the outdoor recreational uses at the Bruce Trail along the Niagara Escarpment, Walker's Living Campus and Royal Niagara Golf Club. Serves as a location along Taylor Road, often used for biking and country drives.	Taylor Road - North of Taylor Road / Primary Quarry Access Road Intersection	42	100	26	100	24	100	25	100	22	100	24	100	13	100	14	100
CR12	Pine Tree Village	Located approximately 1655m northeast from the	Not Applicable																
CR13	Beechwood Golf Club	Located approximately 1787m south from the proposed Waste Disposal Site Boundary Limits. Serves as representative of the outdoor recreational uses at the Beechwood Golf Course and along Beaver Dams Road.	Thorold Townline Road - South of Taylor Road / Thorold Stone Road Intersection	10	100	8	100	12	100	17	100	12	100	16	100	8	100	10	100
CR14	Northwest Secondary Plan Area	Located approximately 1181m east from the proposed Waste Disposal Site Boundary Limits.Serves as representative of an area proposed for future residential development and the western edge of the City of Niagara Falls urban area boundary.	Mountain Road - East of Moutain Road / Garner Road Intersection	21	100	16	100	9	100	15	100	8	100	11	100	5	100	8	100
CR15	Niagara-on-the-Green	Located approximately 1984m north from the	Not Applicable																

Receptor ID (See Map)	Location	Description	Relevant Road Segment	2028				2031				2034				2036			
				Baseline Conditions (with South Landfill Phase 1 and Quarry operation together and no South Landfill Phase 2)				Potential Impact 1 (with South Landfill Phase 1 being closed, Quarry and South Landfill Phase 2 operating together for short period of time)				Potential Impact 2 (with South Landfill Phase 2 operations and no Quarry)				Potential Impact 3 (South Landfill Phase 2 post closure)			
				AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles	AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles	AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles	AM Peak Volume	AM Peak % Heavy Vehicles	PM Peak Volume	PM Peak % Heavy Vehicles
CR16	St Catharines	Located approximately 2893m northwest from the	Not Applicable																
CR17	Nearest residence Northeast and Gauld Nurseries	Located approximately 456m from the proposed Waste Disposal Site Boundary Limits.Representative of the nearest residence northeast of the Waste Disposal Site Boundary Limits, and Gauld Nurseries, an important local business.	Garner Road - North of Mountain Road/ Garner Road Intersection	0	100	1	100	0	100	0	100	0	100	0	100	0	100	0	100
CR18	Residences at South end of Garner Road	Located approximately 1054m from the proposed Waste Disposal Site Boundary Limits. Serves as representative of the cluster of residences on Garner Rd south of the transmission line and north of Thorold Stone Rd.	Garner Road - North of Thorold Stone Road / Garner Road Intersection	2	100	1	100	0	100	2	100	0	100	2	100	0	100	1	100
CR19	Nearest Residence Southwest	Located approximately 1033m from the proposed Waste Disposal Site Boundary Limits. This is a Walker-owned property that is currently tenanted.	Thorold Townline Road West of Taylor Road & Thoroldnline Road Intersecton	10	100	8	100	14	100	29	100	13	100	30	100	7	100	18	100
CR20	Residences east of	Located approximately 1585m from the proposed	Not Applicable																
CR21	Royal Niagara Golf	Located approximately 1146m from the proposed	Not Applicable																

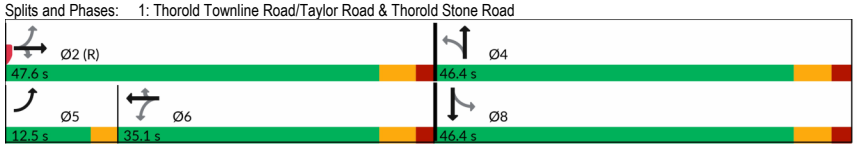
Appendix G:
Interim Conditions (Taylor Road Closure) Traffic Analysis Synchro Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	905	36	49	600	9	30	34	121	7	24	4
Future Volume (vph)	67	905	36	49	600	9	30	34	121	7	24	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.883			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1644	3544	1498	1825	3544	1633	1755	1571	0	1521	1698	0
Flt Permitted	0.371			0.291			0.738			0.551		
Satd. Flow (perm)	642	3544	1498	559	3544	1633	1363	1571	0	882	1698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			39			74		55			4	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
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
Heavy Vehicles (%)	11%	3%	9%	0%	3%	0%	4%	8%	8%	20%	11%	10%
Adj. Flow (vph)	73	984	39	53	652	10	33	37	132	8	26	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	984	39	53	652	10	33	169	0	8	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Don't Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	71.6	68.5	68.5	59.7	59.7	59.7	13.0	13.0		13.0	13.0	
Actuated g/C Ratio	0.76	0.73	0.73	0.64	0.64	0.64	0.14	0.14		0.14	0.14	
v/c Ratio	0.13	0.38	0.04	0.15	0.29	0.01	0.18	0.64		0.07	0.13	
Control Delay (s/veh)	3.9	5.6	1.7	10.3	9.0	0.0	36.3	36.5		34.0	31.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	3.9	5.6	1.7	10.3	9.0	0.0	36.3	36.5		34.0	31.5	
LOS	A	A	A	B	A	A	D	D		C	C	
Approach Delay (s/veh)		5.4			9.0			36.5			32.0	
Approach LOS		A			A			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 10.2		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	984	39	53	652	10	33	169	8	30
v/c Ratio	0.13	0.38	0.04	0.15	0.29	0.01	0.18	0.64	0.07	0.13
Control Delay (s/veh)	3.9	5.6	1.7	10.3	9.0	0.0	36.3	36.5	34.0	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	3.9	5.6	1.7	10.3	9.0	0.0	36.3	36.5	34.0	31.5
Queue Length 50th (m)	2.7	28.3	0.0	3.6	26.6	0.0	5.6	21.0	1.5	4.6
Queue Length 95th (m)	7.9	50.0	3.2	10.9	43.7	0.0	13.2	39.9	5.8	12.2
Internal Link Dist (m)		267.4			983.9			504.0		304.2
Turn Bay Length (m)	95.0		95.0	85.0		90.0	100.0		80.0	
Base Capacity (vph)	590	2584	1102	355	2252	1064	580	700	375	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.38	0.04	0.15	0.29	0.01	0.06	0.24	0.02	0.04

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	905	36	49	600	9	30	34	121	7	24	4
Future Volume (vph)	67	905	36	49	600	9	30	34	121	7	24	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.88		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1644	3544	1498	1825	3544	1633	1755	1570		1521	1698	
Flt Permitted	0.37	1.00	1.00	0.29	1.00	1.00	0.74	1.00		0.55	1.00	
Satd. Flow (perm)	642	3544	1498	559	3544	1633	1363	1570		881	1698	
Peak-hour factor, PHF	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)	73	984	39	53	652	10	33	37	132	8	26	4
RTOR Reduction (vph)	0	0	11	0	0	4	0	47	0	0	3	0
Lane Group Flow (vph)	73	984	28	53	652	6	33	122	0	8	27	0
Heavy Vehicles (%)	11%	3%	9%	0%	3%	0%	4%	8%	8%	20%	11%	10%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	68.5	68.5	68.5	59.1	59.1	59.1	13.0	13.0		13.0	13.0	
Effective Green, g (s)	68.5	68.5	68.5	59.1	59.1	59.1	13.0	13.0		13.0	13.0	
Actuated g/C Ratio	0.73	0.73	0.73	0.63	0.63	0.63	0.14	0.14		0.14	0.14	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	536	2582	1091	351	2228	1026	188	217		121	234	
v/s Ratio Prot	0.01	c0.28			0.18			c0.08			0.02	
v/s Ratio Perm	0.09		0.02	0.09		0.00	0.02			0.01		
v/c Ratio	0.14	0.38	0.03	0.15	0.29	0.01	0.18	0.56		0.07	0.11	
Uniform Delay, d1	3.8	4.8	3.5	7.2	7.9	6.5	35.8	37.8		35.2	35.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4	0.0	0.6	0.2	0.0	0.3	2.4		0.1	0.1	
Delay (s)	3.9	5.2	3.6	7.7	8.1	6.5	36.0	40.2		35.4	35.6	
Level of Service	A	A	A	A	A	A	D	D		D	D	
Approach Delay (s/veh)		5.1			8.1			39.5			35.5	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay (s/veh)	10.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.43			
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5	
Intersection Capacity Utilization	58.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	33	23	0	0	0
Future Volume (vph)	0	33	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	1016	833	951	1812	1830	1353
Flt Permitted			0.757			
Satd. Flow (perm)	1016	833	757	1812	1830	1353
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		833				
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	89%	96%	92%	6%	5%	42%
Adj. Flow (vph)	0	38	26	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	38	26	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm			Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)		0.0	40.3			
Actuated g/C Ratio		0.00	0.90			
v/c Ratio		0.05	0.04			
Control Delay (s/veh)		0.1	3.7			
Queue Delay		0.0	0.0			
Total Delay (s/veh)		0.1	3.7			
LOS		A	A			
Approach Delay (s/veh)	0.1			3.7		
Approach LOS	A			A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.05			
Intersection Signal Delay (s/veh): 1.6		Intersection LOS: A	
Intersection Capacity Utilization 14.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access

Lane Group	EBR	NBL
Lane Group Flow (vph)	38	26
v/c Ratio	0.05	0.04
Control Delay (s/veh)	0.1	3.7
Queue Delay	0.0	0.0
Total Delay (s/veh)	0.1	3.7
Queue Length 50th (m)	0.0	0.0
Queue Length 95th (m)	0.0	6.5
Internal Link Dist (m)		
Turn Bay Length (m)		110.0
Base Capacity (vph)	833	677
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.05	0.04

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	33	23	0	0	0
Future Volume (vph)	0	33	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	6.5			
Lane Util. Factor		1.00	1.00			
Frt		0.85	1.00			
Flt Protected		1.00	0.95			
Satd. Flow (prot)		833	951			
Flt Permitted		1.00	0.76			
Satd. Flow (perm)		833	758			
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	38	26	0	0	0
RTOR Reduction (vph)	0	36	0	0	0	0
Lane Group Flow (vph)	0	2	26	0	0	0
Heavy Vehicles (%)	89%	96%	92%	6%	5%	42%
Turn Type	Perm	Perm	Perm			Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)		2.0	29.4			
Effective Green, g (s)		2.0	29.4			
Actuated g/C Ratio		0.04	0.65			
Clearance Time (s)		7.1	6.5			
Vehicle Extension (s)		4.0	2.5			
Lane Grp Cap (vph)		37	495			
v/s Ratio Prot						
v/s Ratio Perm		c0.00	c0.03			
v/c Ratio		0.05	0.05			
Uniform Delay, d1		20.6	2.8			
Progression Factor		1.00	1.00			
Incremental Delay, d2		0.7	0.2			
Delay (s)		21.3	3.0			
Level of Service		C	A			
Approach Delay (s/veh)	21.3			3.0	0.0	
Approach LOS	C			A	A	

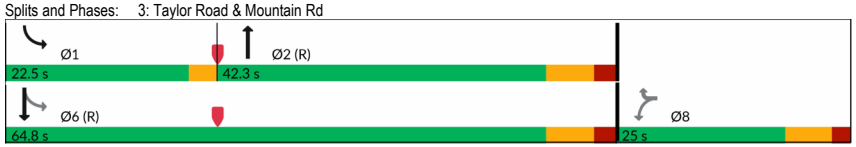
Intersection Summary				
HCM 2000 Control Delay (s/veh)	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.05		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	423	0	0	169	0
Future Volume (vph)	0	423	0	0	169	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected					0.950	
Satd. Flow (prot)	1847	1570	1779	0	1722	1731
Flt Permitted					0.717	
Satd. Flow (perm)	1847	1570	1779	0	1299	1731
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		1091				
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	8%	9%	6%	11%
Adj. Flow (vph)	0	486	0	0	194	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	486	0	0	194	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm			pm+pt	
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Don't Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)		10.0			69.8	
Actuated g/C Ratio		0.11			0.78	
v/c Ratio		0.42			0.18	
Control Delay (s/veh)		1.2			3.0	
Queue Delay		0.0			0.0	
Total Delay (s/veh)		1.2			3.0	
LOS		A			A	
Approach Delay (s/veh)	1.2					3.0
Approach LOS	A					A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay (s/veh): 1.7		Intersection LOS: A	
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd



Lane Group	WBR	SBL
Lane Group Flow (vph)	486	194
v/c Ratio	0.42	0.18
Control Delay (s/veh)	1.2	3.0
Queue Delay	0.0	0.0
Total Delay (s/veh)	1.2	3.0
Queue Length 50th (m)	0.0	6.8
Queue Length 95th (m)	0.0	11.1
Internal Link Dist (m)		
Turn Bay Length (m)		95.0
Base Capacity (vph)	1187	1101
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.41	0.18

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	423	0	0	169	0
Future Volume (vph)	0	423	0	0	169	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			3.0	
Lane Util. Factor		1.00			1.00	
Frt		0.85			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		1570			1722	
Flt Permitted		1.00			0.72	
Satd. Flow (perm)		1570			1300	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	486	0	0	194	0
RTOR Reduction (vph)	0	432	0	0	0	0
Lane Group Flow (vph)	0	54	0	0	194	0
Heavy Vehicles (%)	4%	4%	8%	9%	6%	11%
Turn Type	Perm	Perm			pm+pt	
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)		10.0			65.5	
Effective Green, g (s)		10.0			65.5	
Actuated g/C Ratio		0.11			0.73	
Clearance Time (s)		7.0			3.0	
Vehicle Extension (s)		2.4			2.8	
Lane Grp Cap (vph)		174			987	
v/s Ratio Prot					c0.02	
v/s Ratio Perm		c0.03			c0.12	
v/c Ratio		0.31			0.20	
Uniform Delay, d1		36.7			3.8	
Progression Factor		1.00			1.00	
Incremental Delay, d2		0.7			0.1	
Delay (s)		37.4			3.9	
Level of Service		D			A	
Approach Delay (s/veh)	37.4		0.0			3.9
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	27	4	13	326	169	51
Future Volume (vph)	27	4	13	326	169	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.969	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1472	1795	1711	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1789	1601	1472	1795	1711	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	24%	7%	9%	8%
Adj. Flow (vph)	29	4	14	354	184	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	4	14	354	239	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	4	13	326	169	51
Future Volume (Veh/h)	27	4	13	326	169	51
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)	29	4	14	354	184	55
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	594	212	239			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	594	212	239			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	94	100	99			
cM capacity (veh/h)	463	829	1209			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	29	4	14	354	239
Volume Left	29	0	14	0	0
Volume Right	0	4	0	0	55
cSH	463	829	1209	1700	1700
Volume to Capacity	0.06	0.00*	0.01	0.21	0.14
Queue Length 95th (m)	1.5	0.1	0.3	0.0	0.0
Control Delay (s/veh)	13.3	9.4	8.0	0.0	0.0
Lane LOS	B	A	A		
Approach Delay (s/veh)	12.8		0.3		0.0
Approach LOS	B				

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	27.2%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	25	43	2	1	23
Future Volume (vph)	1	25	43	2	1	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.870	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1772	1715	1601	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1789	1601	1772	1715	1601	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	3%	12%	14%	4%
Adj. Flow (vph)	1	27	46	2	1	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	27	46	2	26	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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	19.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	25	43	2	1	23
Future Volume (Veh/h)	1	25	43	2	1	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	1	27	46	2	1	25
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	108	14	26			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	108	14	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 %	100	97	97			
cM capacity (veh/h)	864	1067	1582			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	28	46	2	26
Volume Left	1	46	0	0
Volume Right	27	0	0	25
cSH	1106	1582	1700	1700
Volume to Capacity	0.03	0.03	0.00*	0.02
Queue Length 95th (m)	0.6	0.7	0.0	0.0
Control Delay (s/veh)	8.5	7.3	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.5	7.0		0.0
Approach LOS	A			

Intersection Summary				
Average Delay		5.6		
Intersection Capacity Utilization		19.0%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

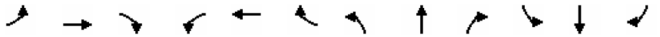
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	126	139	198	50	8	357	5	51	3	2	4
Future Volume (vph)	0	126	139	198	50	8	357	5	51	3	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	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			0.996			0.983			0.940	
Flt Protected					0.963			0.959			0.984	
Satd. Flow (prot)	0	1712	0	0	1825	0	0	1802	0	0	1777	0
Flt Permitted					0.963			0.959			0.984	
Satd. Flow (perm)	0	1712	0	0	1825	0	0	1802	0	0	1777	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	9%	0%	0%	5%	0%	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	0	134	148	211	53	9	380	5	54	3	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	282	0	0	273	0	0	439	0	0	9	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	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	126	139	198	50	8	357	5	51	3	2	4
Future Volume (Veh/h)	0	126	139	198	50	8	357	5	51	3	2	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	134	148	211	53	9	380	5	54	3	2	4
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	62			282			693	692	208	744	762	58
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	62			282			693	692	208	744	762	58
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			84			0	98	93	99	99	100
cM capacity (veh/h)	1541			1292			313	309	827	269	282	1014

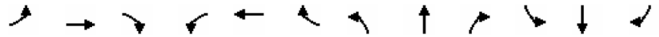
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	282	273	439	9
Volume Left	0	211	380	3
Volume Right	148	9	54	4
cSH	1541	1292	338	406
Volume to Capacity	0.00	0.16	1.30	0.02
Queue Length 95th (m)	0.0	4.4	156.4	0.5
Control Delay (s/veh)	0.0	6.8	185.9	14.1
Lane LOS		A	F	B
Approach Delay (s/veh)	0.0	6.8	185.9	14.1
Approach LOS			F	B

Intersection Summary			
Average Delay	83.3		
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1049	5	4	1155	9	0	5	4	0	7	0
Future Volume (vph)	1	1049	5	4	1155	9	0	5	4	0	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.940				
Flt Protected												
Satd. Flow (prot)	0	3510	1633	0	3539	0	0	1548	0	0	1921	0
Flt Permitted												
Satd. Flow (perm)	0	3510	1633	0	3539	0	0	1548	0	0	1921	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	4%	0%	25%	3%	0%	0%	10%	25%	0%	0%	2%
Adj. Flow (vph)	1	1116	5	4	1229	10	0	5	4	0	7	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1117	5	0	1243	0	0	9	0	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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	49.0%	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)	1	1049	5	4	1155	9	0	5	4	0	7	0
Future Volume (Veh/h)	1	1049	5	4	1155	9	0	5	4	0	7	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	1	1116	5	4	1229	10	0	5	4	0	7	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	1239			1121			1744	2365	558	1809	2365	620
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1239			1121			1744	2365	558	1809	2365	620
tC, single (s)	4.1			4.6			7.5	6.7	7.4	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.4			3.5	4.1	3.6	3.5	4.0	3.3
p0 queue free %	100			99			100	84	99	100	80	100
cM capacity (veh/h)	569			501			47	31	419	43	35	431

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	373	744	5	619	625	9	7
Volume Left	1	0	0	4	0	0	0
Volume Right	0	0	5	0	10	4	0
cSH	569	1700	1700	501	1700	52	35
Volume to Capacity	0.00*	0.44	0.00*	0.00*	0.37	0.17	0.20
Queue Length 95th (m)	0.0	0.0	0.0	0.2	0.0	4.3	4.8
Control Delay (s/veh)	0.1	0.0	0.0	0.2	0.0	87.5	130.7
Lane LOS	A			A		F	F
Approach Delay (s/veh)	0.0			0.1		87.5	130.7
Approach LOS						F	F

Intersection Summary					
Average Delay	0.8				
Intersection Capacity Utilization	49.0%	ICU Level of Service		A	
Analysis Period (min)	15				

* Value less than 0.01.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	15	3	0	7	16
Future Volume (vph)	0	15	3	0	7	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected					0.950	
Satd. Flow (prot)	1511	0	1883	0	1615	1883
Flt Permitted					0.950	
Satd. Flow (perm)	1511	0	1883	0	1615	1883
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	10%	2%	2%	13%	2%
Adj. Flow (vph)	0	16	3	0	8	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	3	0	8	18
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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	97		14	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	15.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	15	3	0	7	16
Future Volume (Veh/h)	0	15	3	0	7	16
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	16	3	0	8	18
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	37	3			3	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	37	3			3	
tC, single (s)	6.4	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.3	
p0 queue free %	100	98			99	
cM capacity (veh/h)	970	1058			1550	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	16	3	8	18
Volume Left	0	0	8	0
Volume Right	16	0	0	0
cSH	1058	1700	1550	1700
Volume to Capacity	0.02	0.00*	0.00*	0.01
Queue Length 95th (m)	0.4	0.0	0.1	0.0
Control Delay (s/veh)	8.5	0.0	7.3	0.0
Lane LOS	A		A	
Approach Delay (s/veh)	8.5	0.0	2.3	
Approach LOS	A			

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	15.8%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	6	30	59	24	8
Future Volume (vph)	38	6	30	59	24	8
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	0.981				0.966	
Flt Protected	0.959			0.983		
Satd. Flow (prot)	1656	0	0	1851	1772	0
Flt Permitted	0.959			0.983		
Satd. Flow (perm)	1656	0	0	1851	1772	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	7%	22%	2%	2%	2%	13%
Adj. Flow (vph)	48	8	38	74	30	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	0	112	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	38	6	30	59	24	8
Future Volume (Veh/h)	38	6	30	59	24	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	48	8	38	74	30	10
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	185	35	40			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185	35	40			
tC, single (s)	6.5	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.5	2.2			
p0 queue free %	94	99	98			
cM capacity (veh/h)	774	983	1570			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	56	112	40
Volume Left	48	38	0
Volume Right	8	0	10
cSH	798	1570	1700
Volume to Capacity	0.07	0.02	0.02
Queue Length 95th (m)	1.7	0.6	0.0
Control Delay (s/veh)	9.9	2.6	0.0
Lane LOS	A	A	
Approach Delay (s/veh)	9.9	2.6	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		4.1		
Intersection Capacity Utilization		21.4%	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)	1	5	6	10	7	31	7	53	9	18	1	1
Future Volume (vph)	1	5	6	10	7	31	7	53	9	18	1	1
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		0.928			0.914			0.983			0.995	
Flt Protected		0.997			0.989			0.995			0.956	
Satd. Flow (prot)	0	1360	0	0	1658	0	0	1812	0	0	1757	0
Flt Permitted		0.997			0.989			0.995			0.956	
Satd. Flow (perm)	0	1360	0	0	1658	0	0	1812	0	0	1757	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	100%	60%	0%	0%	15%	4%	17%	0%	15%	0%	0%	100%
Adj. Flow (vph)	1	6	8	13	9	39	9	66	11	23	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	61	0	0	86	0	0	25	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	1	5	6	10	7	31	7	53	9	18	1	1
Future Volume (vph)	1	5	6	10	7	31	7	53	9	18	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	1	6	8	12	9	39	9	66	11	22	1	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	15	60	86	24
Volume Left (vph)	1	12	9	22
Volume Right (vph)	8	39	11	1
Hadj (s)	0.21	-0.27	0.01	0.23
Departure Headway (s)	4.4	3.9	4.1	4.4
Degree Utilization, x	0.02	0.06	0.10	0.03
Capacity (veh/h)	789	896	854	802
Control Delay (s/veh)	7.5	7.2	7.5	7.5
Approach Delay (s/veh)	7.5	7.2	7.5	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	134	1	0	415	1	0
Future Volume (vph)	134	1	0	415	1	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	0.999					
Flt Protected					0.950	
Satd. Flow (prot)	1762	0	0	1847	1825	0
Flt Permitted					0.950	
Satd. Flow (perm)	1762	0	0	1847	1825	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	9%	0%	2%	4%	0%	2%
Adj. Flow (vph)	165	1	0	512	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	0	0	512	1	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	134	1	0	415	1	0
Future Volume (Veh/h)	134	1	0	415	1	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	165	1	0	512	1	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)	184					
pX, platoon unblocked						
vC, conflicting volume			166		678	166
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			166		678	166
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)			1412		421	879

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	166	512	1
Volume Left	0	0	1
Volume Right	1	0	0
cSH	1700	1412	421
Volume to Capacity	0.10	0.00	0.00*
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s/veh)	0.0	0.0	13.6
Lane LOS			B
Approach Delay (s/veh)	0.0	0.0	13.6
Approach LOS			B

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		31.8%	ICU Level of Service A
Analysis Period (min)		15	

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	12	0	0	2	2	78	3	3	16	0
Future Volume (vph)	0	0	12	0	0	2	2	78	3	3	16	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		0.865			0.865			0.996				
Flt Protected								0.999			0.993	
Satd. Flow (prot)	0	1471	0	0	1662	0	0	1809	0	0	1757	0
Flt Permitted								0.999			0.993	
Satd. Flow (perm)	0	1471	0	0	1662	0	0	1809	0	0	1757	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	13%	2%	2%	0%	0%	6%	0%	0%	10%	2%
Adj. Flow (vph)	0	0	13	0	0	2	2	87	3	3	18	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	13	0	0	2	0	0	92	0	0	21	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	14.6%	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	12	0	0	2	2	78	3	3	16	0
Future Volume (Veh/h)	0	0	12	0	0	2	2	78	3	3	16	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	13	0	0	2	2	87	3	3	18	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	119	118	18	130	117	89	18			90		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119	118	18	130	117	89	18			90		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	853	770	1029	831	771	975	1612			1518		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	13	2	92	21
Volume Left	0	0	2	3
Volume Right	13	2	3	0
cSH	1029	975	1612	1518
Volume to Capacity	0.01	0.00*	0.00*	0.00*
Queue Length 95th (m)	0.3	0.0	0.0	0.0
Control Delay (s/veh)	8.5	8.7	0.2	1.1
Lane LOS	A	A	A	A
Approach Delay (s/veh)	8.5	8.7	0.2	1.1
Approach LOS	A	A		

Intersection Summary				
Average Delay		1.3		
Intersection Capacity Utilization		14.6%	ICU Level of Service	A
Analysis Period (min)		15		

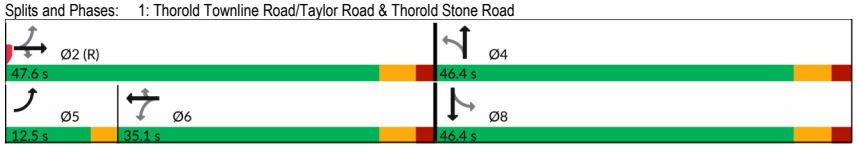
* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1382	52	151	1077	1	61	11	102	8	30	5
Future Volume (vph)	11	1382	52	151	1077	1	61	11	102	8	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	95.0		95.0	85.0		90.0	100.0		0.0	80.0		0.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	85.0			100.0			90.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.864			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1722	3579	1512	1825	3579	1458	1706	1652	0	1825	1821	0
Flt Permitted	0.216			0.168			0.734			0.682		
Satd. Flow (perm)	391	3579	1512	323	3579	1458	1318	1652	0	1310	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			54			74		13			5	
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		291.4			1007.9			528.0			328.2	
Travel Time (s)		13.1			45.4			23.8			14.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	6%	2%	8%	0%	2%	12%	7%	5%	0%	0%	3%	5%
Adj. Flow (vph)	11	1425	54	156	1110	1	63	11	105	8	31	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1425	54	156	1110	1	63	116	0	8	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			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	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	6.1	30.5	6.1	6.1	30.5	6.1	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		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	
Detector 1 Size(m)	6.1	1.8	6.1	6.1	1.8	6.1	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		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	
Detector 1 Queue (s)	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	
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	
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		2	6		6	4	4		8		
Detector Phase	5	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.5	35.1	35.1	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (s)	12.5	47.6	47.6	35.1	35.1	35.1	46.4	46.4		46.4	46.4	
Total Split (%)	13.3%	50.6%	50.6%	37.3%	37.3%	37.3%	49.4%	49.4%		49.4%	49.4%	
Maximum Green (s)	9.5	41.5	41.5	29.0	29.0	29.0	40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1		4.1	4.1	
All-Red Time (s)	0.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Recall Mode	None	C-Max	C-Max	None	None	None	None	None		None	None	
Walk Time (s)		11.0	11.0	11.0	11.0	11.0	15.0	15.0		15.0	15.0	
Flash Don't Walk (s)		18.0	18.0	18.0	18.0	18.0	25.0	25.0		25.0	25.0	
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	
Act Effct Green (s)	72.8	69.7	69.7	67.5	67.5	67.5	11.8	11.8		11.8	11.8	
Actuated g/C Ratio	0.77	0.74	0.74	0.72	0.72	0.72	0.13	0.13		0.13	0.13	
v/c Ratio	0.03	0.54	0.05	0.68	0.43	0.00	0.38	0.53		0.05	0.15	
Control Delay (s/veh)	3.1	6.4	1.3	28.6	7.0	0.0	43.9	42.8		35.1	33.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	3.1	6.4	1.3	28.6	7.0	0.0	43.9	42.8		35.1	33.3	
LOS	A	A	A	C	A	A	D	D		D	C	
Approach Delay (s/veh)		6.2			9.6			43.2			33.6	
Approach LOS		A			A			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay (s/veh): 10.3		Intersection LOS: B	
Intersection Capacity Utilization 72.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Thorold Townline Road/Taylor Road & Thorold Stone Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	1425	54	156	1110	1	63	116	8	36
v/c Ratio	0.03	0.54	0.05	0.68	0.43	0.00	0.38	0.53	0.05	0.15
Control Delay (s/veh)	3.1	6.4	1.3	28.6	7.0	0.0	43.9	42.8	35.1	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	3.1	6.4	1.3	28.6	7.0	0.0	43.9	42.8	35.1	33.3
Queue Length 50th (m)	0.4	45.7	0.0	10.9	31.0	0.0	11.4	18.7	1.3	5.3
Queue Length 95th (m)	1.8	74.8	3.2	#61.2	76.8	0.0	23.3	34.2	5.2	13.4
Internal Link Dist (m)		267.4			983.9			504.0		304.2
Turn Bay Length (m)	95.0		95.0	85.0		90.0	100.0		80.0	
Base Capacity (vph)	437	2653	1135	231	2570	1067	560	710	557	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.54	0.05	0.68	0.43	0.00	0.11	0.16	0.01	0.05

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)	11	1382	52	151	1077	1	61	11	102	8	30	5
Future Volume (vph)	11	1382	52	151	1077	1	61	11	102	8	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	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	0.86		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1722	3579	1512	1825	3579	1458	1706	1652		1825	1821	
Flt Permitted	0.22	1.00	1.00	0.17	1.00	1.00	0.73	1.00		0.68	1.00	
Satd. Flow (perm)	392	3579	1512	323	3579	1458	1317	1652		1311	1821	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	11	1425	54	156	1110	1	63	11	105	8	31	5
RTOR Reduction (vph)	0	0	14	0	0	0	0	11	0	0	4	0
Lane Group Flow (vph)	11	1425	40	156	1110	1	63	105	0	8	32	0
Heavy Vehicles (%)	6%	2%	8%	0%	2%	12%	7%	5%	0%	0%	3%	5%
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4	4		8		
Actuated Green, G (s)	69.7	69.7	69.7	65.1	65.1	65.1	11.8	11.8		11.8	11.8	
Effective Green, g (s)	69.7	69.7	69.7	65.1	65.1	65.1	11.8	11.8		11.8	11.8	
Actuated g/C Ratio	0.74	0.74	0.74	0.69	0.69	0.69	0.13	0.13		0.13	0.13	
Clearance Time (s)	3.0	6.1	6.1	6.1	6.1	6.1	6.4	6.4		6.4	6.4	
Vehicle Extension (s)	2.5	6.0	6.0	6.0	6.0	6.0	2.3	2.3		2.3	2.3	
Lane Grp Cap (vph)	313	2653	1121	223	2478	1009	165	207		164	228	
v/s Ratio Prot	0.00	c0.40			0.31			c0.06			0.02	
v/s Ratio Perm	0.03		0.03	c0.48		0.00	0.05			0.01		
v/c Ratio	0.04	0.54	0.04	0.70	0.45	0.00	0.38	0.51		0.05	0.14	
Uniform Delay, d1	3.8	5.2	3.2	8.6	6.4	4.4	37.8	38.4		36.2	36.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.8	0.1	13.5	0.4	0.0	0.9	1.1		0.1	0.2	
Delay (s)	3.8	6.0	3.3	22.1	6.8	4.4	38.6	39.5		36.2	36.7	
Level of Service	A	A	A	C	A	A	D	D		D	D	
Approach Delay (s/veh)		5.9			8.7			39.2			36.6	
Approach LOS		A			A			D			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	94.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	22	7	0	0	0
Future Volume (vph)	0	22	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	110.0			80.0
Storage Lanes	1	1	1			1
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected			0.950			
Satd. Flow (prot)	1201	933	981	1830	1865	961
Flt Permitted			0.757			
Satd. Flow (perm)	1201	933	782	1830	1865	961
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		933				
Link Speed (k/h)	50			70	70	
Link Distance (m)	70.6			713.0	427.2	
Travel Time (s)	5.1			36.7	22.0	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	60%	75%	86%	5%	3%	100%
Adj. Flow (vph)	0	23	7	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	23	7	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (m)	6.1	6.1	6.1	30.5	30.5	6.1
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	6.1	6.1	6.1	1.8	1.8	6.1
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)				28.7	28.7	
Detector 2 Size(m)				1.8	1.8	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Perm	Perm	Perm			Perm
Protected Phases				2	6	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	15.4	15.4	16.0	16.0	16.0	16.0
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	3.0	3.0	2.4	2.4	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0	4.0	2.5	2.5	2.5	2.5
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Flash Don't Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0
Act Effct Green (s)		0.0	40.3			
Actuated g/C Ratio		0.00	0.90			
v/c Ratio		0.02	0.01			
Control Delay (s/veh)		0.0	3.9			
Queue Delay		0.0	0.0			
Total Delay (s/veh)		0.0	3.9			
LOS		A	A			
Approach Delay (s/veh)				3.9		
Approach LOS				A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 45			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.02			
Intersection Signal Delay (s/veh): 0.9		Intersection LOS: A	
Intersection Capacity Utilization 14.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Taylor Road & East Access

Lane Group	EBR	NBL
Lane Group Flow (vph)	23	7
v/c Ratio	0.02	0.01
Control Delay (s/veh)	0.0	3.9
Queue Delay	0.0	0.0
Total Delay (s/veh)	0.0	3.9
Queue Length 50th (m)	0.0	0.0
Queue Length 95th (m)	0.0	2.7
Internal Link Dist (m)		
Turn Bay Length (m)		110.0
Base Capacity (vph)	933	700
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.02	0.01

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	22	7	0	0	0
Future Volume (vph)	0	22	7	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	6.5			
Lane Util. Factor		1.00	1.00			
Frt		0.85	1.00			
Flt Protected		1.00	0.95			
Satd. Flow (prot)		933	981			
Flt Permitted		1.00	0.76			
Satd. Flow (perm)		933	782			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	23	7	0	0	0
RTOR Reduction (vph)	0	22	0	0	0	0
Lane Group Flow (vph)	0	1	7	0	0	0
Heavy Vehicles (%)	60%	75%	86%	5%	3%	100%
Turn Type	Perm	Perm	Perm			Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)		2.0	29.4			
Effective Green, g (s)		2.0	29.4			
Actuated g/C Ratio		0.04	0.65			
Clearance Time (s)		7.1	6.5			
Vehicle Extension (s)		4.0	2.5			
Lane Grp Cap (vph)		41	510			
v/s Ratio Prot						
v/s Ratio Perm		c0.00	c0.01			
v/c Ratio		0.02	0.01			
Uniform Delay, d1		20.6	2.7			
Progression Factor		1.00	1.00			
Incremental Delay, d2		0.3	0.0			
Delay (s)		20.9	2.8			
Level of Service		C	A			
Approach Delay (s/veh)	20.9			2.8	0.0	
Approach LOS	C			A	A	

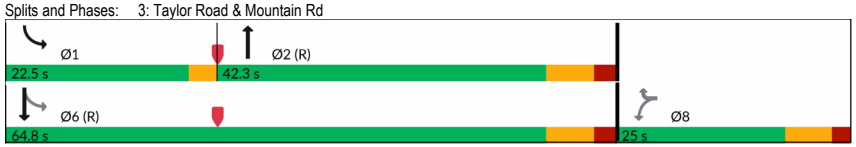
Intersection Summary				
HCM 2000 Control Delay (s/veh)	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.01		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.6
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	400	0	0	447	0
Future Volume (vph)	0	400	0	0	447	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0	0.0		0.0	95.0	
Storage Lanes	1	1		0	1	
Taper Length (m)	100.0				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected					0.950	
Satd. Flow (prot)	1883	1570	1847	0	1789	1865
Flt Permitted					0.714	
Satd. Flow (perm)	1883	1570	1847	0	1345	1865
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		1091				
Link Speed (k/h)	70		70			60
Link Distance (m)	184.1		195.9			753.7
Travel Time (s)	9.5		10.1			45.2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	4%	4%	8%	2%	3%
Adj. Flow (vph)	0	421	0	0	471	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	421	0	0	471	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Number of Detectors	1	1	2		1	2
Detector Template	Left	Right	Thru		Left	Thru
Leading Detector (m)	6.1	6.1	30.5		6.1	30.5
Trailing Detector (m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0		0.0	0.0
Detector 1 Size(m)	6.1	6.1	1.8		6.1	1.8
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(m)			28.7			28.7
Detector 2 Size(m)			1.8			1.8
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Perm			pm+pt	
Protected Phases			2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	8	8			6	
Detector Phase	8	8	2		1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		8.0	20.0
Minimum Split (s)	25.0	25.0	42.3		22.5	42.3
Total Split (s)	25.0	25.0	42.3		22.5	64.8
Total Split (%)	27.8%	27.8%	47.1%		25.1%	72.2%
Maximum Green (s)	18.0	18.0	35.0		19.5	57.5
Yellow Time (s)	5.0	5.0	5.0		3.0	5.0
All-Red Time (s)	2.0	2.0	2.3		0.0	2.3
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	7.3		3.0	7.3
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	2.4	2.4	2.4		2.8	2.4
Recall Mode	None	None	C-Max		None	C-Max
Walk Time (s)	7.0	7.0	13.0			13.0
Flash Don't Walk (s)	11.0	11.0	22.0			22.0
Pedestrian Calls (#/hr)	0	0	0			0
Act Effct Green (s)		10.0			69.8	
Actuated g/C Ratio		0.11			0.78	
v/c Ratio		0.37			0.43	
Control Delay (s/veh)		0.9			4.3	
Queue Delay		0.0			0.0	
Total Delay (s/veh)		0.9			4.3	
LOS		A			A	
Approach Delay (s/veh)	0.9					4.3
Approach LOS	A					A

Intersection Summary			
Area Type:	Other		
Cycle Length: 89.8			
Actuated Cycle Length: 89.8			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay (s/veh): 2.7		Intersection LOS: A	
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Taylor Road & Mountain Rd



Lane Group	WBR	SBL
Lane Group Flow (vph)	421	471
v/c Ratio	0.37	0.43
Control Delay (s/veh)	0.9	4.3
Queue Delay	0.0	0.0
Total Delay (s/veh)	0.9	4.3
Queue Length 50th (m)	0.0	19.2
Queue Length 95th (m)	0.0	29.0
Internal Link Dist (m)		
Turn Bay Length (m)		95.0
Base Capacity (vph)	1187	1141
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.35	0.41

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	400	0	0	447	0
Future Volume (vph)	0	400	0	0	447	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			3.0	
Lane Util. Factor		1.00			1.00	
Frt		0.85			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		1570			1789	
Flt Permitted		1.00			0.71	
Satd. Flow (perm)		1570			1345	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	421	0	0	471	0
RTOR Reduction (vph)	0	374	0	0	0	0
Lane Group Flow (vph)	0	47	0	0	471	0
Heavy Vehicles (%)	2%	4%	4%	8%	2%	3%
Turn Type	Perm	Perm			pm+pt	
Protected Phases			2		1	6
Permitted Phases	8	8			6	
Actuated Green, G (s)		10.0			65.5	
Effective Green, g (s)		10.0			65.5	
Actuated g/C Ratio		0.11			0.73	
Clearance Time (s)		7.0			3.0	
Vehicle Extension (s)		2.4			2.8	
Lane Grp Cap (vph)		174			1043	
v/s Ratio Prot					c0.06	
v/s Ratio Perm		c0.03			c0.27	
v/c Ratio		0.27			0.45	
Uniform Delay, d1		36.6			4.5	
Progression Factor		1.00			1.00	
Incremental Delay, d2		0.5			0.3	
Delay (s)		37.1			4.8	
Level of Service		D			A	
Approach Delay (s/veh)	37.1		0.0			4.8
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	17.3
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	51	13	3	266	444	9
Future Volume (vph)	51	13	3	266	444	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0	40.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		100.0			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.997	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1362	1847	1869	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1789	1601	1362	1847	1869	0
Link Speed (k/h)	48			60	60	
Link Distance (m)	375.1			753.7	268.8	
Travel Time (s)	28.1			45.2	16.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	34%	4%	2%	25%
Adj. Flow (vph)	55	14	3	286	477	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	14	3	286	487	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	51	13	3	266	444	9
Future Volume (Veh/h)	51	13	3	266	444	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	55	14	3	286	477	10
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	774	482	487			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	774	482	487			
tC, single (s)	6.4	6.2	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.5			
p0 queue free %	85	98	100			
cM capacity (veh/h)	366	584	929			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	55	14	3	286	487
Volume Left	55	0	3	0	0
Volume Right	0	14	0	0	10
cSH	366	584	929	1700	1700
Volume to Capacity	0.15	0.02	0.00*	0.17	0.29
Queue Length 95th (m)	4.0	0.6	0.1	0.0	0.0
Control Delay (s/veh)	16.6	11.3	8.9	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s/veh)	15.5		0.1		0.0
Approach LOS	C				

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	33.9%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	59	25	0	3	13
Future Volume (vph)	1	59	25	0	3	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	50.0	0.0			0.0
Storage Lanes	1	1	1			0
Taper Length (m)	2.5		2.5			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.889	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1789	1601	1573	1812	1389	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1789	1601	1573	1812	1389	0
Link Speed (k/h)	50			70	70	
Link Distance (m)	204.8			328.2	1008.3	
Travel Time (s)	14.7			16.9	51.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	16%	6%	4%	27%
Adj. Flow (vph)	1	63	27	0	3	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	63	27	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			7.4	7.4	
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	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	59	25	0	3	13
Future Volume (Veh/h)	1	59	25	0	3	13
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	1	63	27	0	3	14
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type				None	None	
Median storage veh)						
Upstream signal (m)				328		
pX, platoon unblocked						
vC, conflicting volume	64	10	17			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	64	10	17			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	100	94	98			
cM capacity (veh/h)	925	1071	1514			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	64	27	0	17
Volume Left	1	27	0	0
Volume Right	63	0	0	14
cSH	1088	1514	1700	1700
Volume to Capacity	0.06	0.02	0.00	0.01
Queue Length 95th (m)	1.4	0.4	0.0	0.0
Control Delay (s/veh)	8.6	7.4	0.0	0.0
Lane LOS	A	A		
Approach Delay (s/veh)	8.6	7.4		0.0
Approach LOS	A			

Intersection Summary				
Average Delay		6.9		
Intersection Capacity Utilization		18.1%	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)	1	245	353	153	51	1	345	4	36	2	1	0
Future Volume (vph)	1	245	353	153	51	1	345	4	36	2	1	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		0.920			0.999			0.987				
Flt Protected					0.964			0.957			0.968	
Satd. Flow (prot)	0	1725	0	0	1841	0	0	1693	0	0	1395	0
Flt Permitted					0.964			0.957			0.968	
Satd. Flow (perm)	0	1725	0	0	1841	0	0	1693	0	0	1395	0
Link Speed (k/h)		70			70			80			60	
Link Distance (m)		884.7			985.2			693.4			600.2	
Travel Time (s)		45.5			50.7			31.2			36.0	
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%	6%	0%	0%	2%	0%	8%	0%	0%	50%	0%	2%
Adj. Flow (vph)	1	263	380	165	55	1	371	4	39	2	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	644	0	0	221	0	0	414	0	0	3	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	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	245	353	153	51	1	345	4	36	2	1	0
Future Volume (Veh/h)	1	245	353	153	51	1	345	4	36	2	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	1	263	380	165	55	1	371	4	39	2	1	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	56			643			841	841	453	882	1031	56
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	56			643			841	841	453	882	1031	56
tC, single (s)	4.1			4.1			7.2	6.5	6.2	7.6	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.3	4.0	4.0	3.3
p0 queue free %	100			83			0	98	94	99	99	100
cM capacity (veh/h)	1562			951			240	251	611	177	194	1011

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	644	221	414	3
Volume Left	1	165	371	2
Volume Right	380	1	39	0
cSH	1562	951	254	183
Volume to Capacity	0.00*	0.17	1.63	0.02
Queue Length 95th (m)	0.0	4.8	197.1	0.4
Control Delay (s/veh)	0.0	7.6	334.5	25.0
Lane LOS	A	A	F	D
Approach Delay (s/veh)	0.0	7.6	334.5	25.0
Approach LOS			F	D

Intersection Summary				
Average Delay		109.4		
Intersection Capacity Utilization	83.8%	ICU Level of Service		E
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1465	13	1	1339	16	0	7	2	0	11	0
Future Volume (vph)	1	1465	13	1	1339	16	0	7	2	0	11	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.970				
Flt Protected												
Satd. Flow (prot)	0	3579	1633	0	3569	0	0	1863	0	0	1921	0
Flt Permitted												
Satd. Flow (perm)	0	3579	1633	0	3569	0	0	1863	0	0	1921	0
Link Speed (k/h)		80			80			80			80	
Link Distance (m)		1007.9			1349.4			495.3			723.5	
Travel Time (s)		45.4			60.7			22.3			32.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	0%	0%	2%	7%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	1	1510	13	1	1380	16	0	7	2	0	11	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1511	13	0	1397	0	0	9	0	0	11	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			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 54.2%		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)	1	1465	13	1	1339	16	0	7	2	0	11	0
Future Volume (Veh/h)	1	1465	13	1	1339	16	0	7	2	0	11	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	1	1510	13	1	1380	16	0	7	2	0	11	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	1396			1523			2210	2910	755	2153	2915	698
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1396			1523			2210	2910	755	2153	2915	698
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
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	56	99	100	30	100
cM capacity (veh/h)	496			444			11	16	356	18	16	383

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	504	1007	13	691	706	9	11
Volume Left	1	0	0	1	0	0	0
Volume Right	0	0	13	0	16	2	0
cSH	496	1700	1700	444	1700	20	16
Volume to Capacity	0.00*	0.59	0.00*	0.00*	0.42	0.45	0.70
Queue Length 95th (m)	0.0	0.0	0.0	0.1	0.0	9.7	13.4
Control Delay (s/veh)	0.1	0.0	0.0	0.1	0.0	288.5	446.3
Lane LOS	A			A		F	F
Approach Delay (s/veh)	0.0			0.0		288.5	446.3
Approach LOS						F	F

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	54.2%	ICU Level of Service		A
Analysis Period (min)	15			

* Value less than 0.01.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	6	1	2	9	13
Future Volume (vph)	0	6	1	2	9	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0	85.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				100.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.910			
Flt Protected					0.950	
Satd. Flow (prot)	1568	0	1714	0	1738	1883
Flt Permitted					0.950	
Satd. Flow (perm)	1568	0	1714	0	1738	1883
Link Speed (k/h)	80		70			70
Link Distance (m)	79.4		1008.3			713.0
Travel Time (s)	3.6		51.9			36.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	6%	2%	2%	5%	2%
Adj. Flow (vph)	0	6	1	2	9	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	3	0	9	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		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		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	6	1	2	9	13
Future Volume (Veh/h)	0	6	1	2	9	13
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	6	1	2	9	14
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	34	2			3	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	2			3	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	974	1071			1600	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	6	3	9	14
Volume Left	0	0	9	0
Volume Right	6	2	0	0
cSH	1071	1700	1600	1700
Volume to Capacity	0.00*	0.00*	0.00*	0.00*
Queue Length 95th (m)	0.1	0.0	0.1	0.0
Control Delay (s/veh)	8.4	0.0	7.3	0.0
Lane LOS	A		A	
Approach Delay (s/veh)	8.4	0.0	2.8	
Approach LOS	A			

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	18	12	36	55	30
Future Volume (vph)	13	18	12	36	55	30
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	0.921				0.952	
Flt Protected	0.980			0.988		
Satd. Flow (prot)	1734	0	0	1861	1806	0
Flt Permitted	0.980			0.988		
Satd. Flow (perm)	1734	0	0	1861	1806	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	307.8			204.8	258.0	
Travel Time (s)	22.2			14.7	18.6	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	2%	0%
Adj. Flow (vph)	15	21	14	42	64	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	56	99	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	24			14
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	18	12	36	55	30
Future Volume (Veh/h)	13	18	12	36	55	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	15	21	14	42	64	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	152	82	99			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	82	99			
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	98	99			
cM capacity (veh/h)	837	984	1494			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	36	56	99
Volume Left	15	14	0
Volume Right	21	0	35
cSH	917	1494	1700
Volume to Capacity	0.04	0.00*	0.06
Queue Length 95th (m)	0.9	0.2	0.0
Control Delay (s/veh)	9.1	1.9	0.0
Lane LOS	A	A	
Approach Delay (s/veh)	9.1	1.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	16	15	2	5	15	21	7	22	5	5
Future Volume (vph)	0	9	16	15	2	5	15	21	7	22	5	5
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		0.914			0.970			0.978			0.979	
Flt Protected					0.967			0.983			0.967	
Satd. Flow (prot)	0	1414	0	0	1802	0	0	1621	0	0	1819	0
Flt Permitted					0.967			0.983			0.967	
Satd. Flow (perm)	0	1414	0	0	1802	0	0	1621	0	0	1819	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		108.3			156.3			390.5			72.5	
Travel Time (s)		7.8			11.3			28.1			5.2	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	67%	0%	0%	0%	0%	20%	0%	43%	0%	0%	0%
Adj. Flow (vph)	0	13	23	21	3	7	21	30	10	31	7	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	31	0	0	61	0	0	45	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			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	9	16	15	2	5	15	21	7	22	5	5
Future Volume (vph)	0	9	16	15	2	5	15	21	7	22	5	5
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	0	13	23	21	3	7	21	30	10	31	7	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	36	31	61	45
Volume Left (vph)	0	21	21	31
Volume Right (vph)	23	7	10	7
Hadj (s)	0.03	0.00	0.21	0.04
Departure Headway (s)	4.2	4.2	4.3	4.2
Degree Utilization, x	0.04	0.04	0.07	0.05
Capacity (veh/h)	831	836	813	846
Control Delay (s/veh)	7.4	7.3	7.6	7.4
Approach Delay (s/veh)	7.4	7.3	7.6	7.4
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.5		
Level of Service	A		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	269	1	1	400	1	1
Future Volume (vph)	269	1	1	400	1	1
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					0.976	
Satd. Flow (prot)	1824	0	0	1879	874	0
Flt Permitted					0.976	
Satd. Flow (perm)	1824	0	0	1879	874	0
Link Speed (k/h)	70			70	50	
Link Distance (m)	184.1			884.7	224.6	
Travel Time (s)	9.5			45.5	16.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	100%	100%	2%	100%	100%
Adj. Flow (vph)	283	1	1	421	1	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	284	0	0	422	2	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.7			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)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	269	1	1	400	1	1
Future Volume (Veh/h)	269	1	1	400	1	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	283	1	1	421	1	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	184					
pX, platoon unblocked						
vC, conflicting volume			284		707	284
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			284		707	284
tC, single (s)			5.1		7.4	7.2
tC, 2 stage (s)						
tF (s)			3.1		4.4	4.2
p0 queue free %			100		100	100
cM capacity (veh/h)			875		286	571

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	284	422	2
Volume Left	0	1	1
Volume Right	1	0	1
cSH	1700	875	381
Volume to Capacity	0.17	0.00*	0.00*
Queue Length 95th (m)	0.0	0.0	0.1
Control Delay (s/veh)	0.0	0.0	14.5
Lane LOS		A	B
Approach Delay (s/veh)	0.0	0.0	14.5
Approach LOS			B

Intersection Summary				
Average Delay		0.1		
Intersection Capacity Utilization		31.8%	ICU Level of Service	A
Analysis Period (min)		15		

* Value less than 0.01.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	3	3	0	1	1	46	0	0	66	0
Future Volume (vph)	0	0	3	3	0	1	1	46	0	0	66	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		0.865			0.973							
Flt Protected					0.962			0.999				
Satd. Flow (prot)	0	1662	0	0	1798	0	0	1578	0	0	1921	0
Flt Permitted					0.962			0.999				
Satd. Flow (perm)	0	1662	0	0	1798	0	0	1578	0	0	1921	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		102.1			176.5			258.0			689.0	
Travel Time (s)		7.4			12.7			18.6			49.6	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	2%	2%	0%	0%	2%	0%	0%	22%	2%	2%	0%	2%
Adj. Flow (vph)	0	0	4	4	0	1	1	58	0	0	83	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	5	0	0	59	0	0	83	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	13.5%	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	3	3	0	1	1	46	0	0	66	0
Future Volume (Veh/h)	0	0	3	3	0	1	1	46	0	0	66	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	4	4	0	1	1	58	0	0	82	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	143	142	82	146	142	58	82			58		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	143	142	82	146	142	58	82			58		
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)	825	749	983	823	749	1014	1528			1546		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	5	59	82
Volume Left	0	4	1	0
Volume Right	4	1	0	0
cSH	983	856	1528	1546
Volume to Capacity	0.00*	0.00*	0.00*	0.00
Queue Length 95th (m)	0.1	0.1	0.0	0.0
Control Delay (s/veh)	8.7	9.2	0.1	0.0
Lane LOS	A	A	A	
Approach Delay (s/veh)	8.7	9.2	0.1	0.0
Approach LOS	A	A		

Intersection Summary					
Average Delay		0.6			
Intersection Capacity Utilization	13.5%	ICU Level of Service		A	
Analysis Period (min)	15				

* Value less than 0.01.