# TRAFFIC IMPACT STUDY

## GLENELG PHASE 3

## DUNDALK
## GREY COUNTY, ONTARIO

**PREPARED FOR:**

**DUNDALK VILLAGE TWO INC.**

**PREPARED BY:**

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| Rev. 0 | August 2022 | First submission to Township and County |

# 1.0 Executive Summary

C. F. Crozier and Associates Inc. was retained by Flato Dundalk Meadows Inc. to undertake a Traffic Impact Study (TIS) to support a Draft Plan of Subdivision Application for Glenelg Phase 3, which is located in the north end of the Community of Dundalk, Township of Southgate, County of Grey. The Subject Property is located northeast of Phase 2 of the Glenelg Residential Development.

The proposed Draft Plan prepared by MHBC, August 18th, 2022, consists of 369 single detached dwelling units, 72 townhouse dwelling units, and 18 semi-detached dwelling units.

The residential development is proposed to connect to the boundary road network through one access in the White Rose Phase 3 development (Bradley Street Extension) and two accesses through Glenelg Phase 1. The Subject Property will directly connect to Corbet Street in Glenelg Phase 2 which connects to the two accesses in Glenelg Phase 1.

The TIS analyzes the following intersections:

- Glenelg Street and Ida Street
- Dundalk Street and Glenelg Street
- Ida Street and Main Street
- Dundalk Street and Main Street
- Main Street and Osprey Street
- Main Street and Owen Sound Street
- Osprey Street and Bradley Street

Intersection analysis of the existing traffic volumes indicates that all study intersections are operating at a Level of Service (LOS) "B" or better during the weekday a.m. and p.m. peak hours. The study intersections have capacity for increases in traffic volumes.

Per the agreed upon Terms of Reference, horizon years of 2027 and 2032 were assessed which represent five and ten years from the study date. A growth rate of 1.5 percent compounded annually was used to forecast the future total traffic volumes. Several background developments have been considered for the assessment of the background conditions. These developments include Glenelg Phase 1, Glenelg Phase 2, the unoccupied Edgewood Greens units, and White Rose Phase 3. A sensitivity analysis investigated the impacts of the Eco Parkway extension and associated industrial lands.

Intersection analysis of the 2032 future background traffic volumes indicates the following:

- The southbound movement at the Dundalk Street and Main Street intersection is forecast to operate with a LOS "E" during the weekday a.m. and p.m. peak hours. A maximum volume-to-capacity ratio of 0.70 (SB) and control delay 37.4 seconds are forecast.
- The remaining study intersections are forecast to operate at a LOS "C" or better.

The proposed development is estimated to generate 285 and 389 total two-way primary trips during the weekday a.m. and p.m. peak hours, respectively.

Intersection analysis of the 2032 future total traffic volumes indicates the following:

- The study intersections are forecast to continue operating with a LOS "B" or better in the weekday a.m. and p.m. peak hours under 2032 future background traffic volume conditions,

except for the intersections of: Dundalk Street and Main Street, Osprey Street and Main Street, and Owen Sound Street and Main Street.

- The intersection of Dundalk Street and Main Street is forecast to operate with an LOS "E" or better in the weekday a.m. and p.m. peak periods, respectively. A maximum control delay of 40.0 seconds, and a maximum volume-to-capacity ratio of 0.73 (SB).
    - When compared to 2032 future background operations, an increase in control delay of 2.6 seconds and the volume-to-capacity ratio is forecast to increase by 0.03.
- The intersection of Osprey Street and Main Street is forecast to operate with an LOS "D" in the weekday a.m. and p.m. peak periods, respectively. A maximum control delay of 34.8 seconds, and a maximum volume-to-capacity ratio of 0.52 (SB).
    - When compared to 2032 future background operations, an increase in control delay of 9.6 seconds and a maximum change of 0.22 in the volume-to-capacity ratio is forecast.
- The intersection of Owen Sound Street and Main Street is forecast to operate with an LOS "E" or better in the weekday a.m. and p.m. peak periods, respectively. A maximum control delay of 35.2 seconds and a maximum volume-to-capacity ratio of 0.55 (SB) are forecast.
    - When compared to 2032 future background operations, an increase in control delay of 14.0 seconds and a maximum change of 0.31 in the volume-to-capacity ratio is forecast.

As requested in the Terms of reference, a scenario analyzing the impacts of the Glenelg Phase 3 development with both the Eco Parkway extension and development of surrounding industrial lands was completed. The Eco Parkway extension and the proposed industrial development lands are estimated to produce 1,376 and 1,266 external two-way trips in the a.m. and p.m. peak hours, respectively. The Eco Parkway extension is also anticipated to reroute 30% of traffic volumes on Main Street around downtown Dundalk.

In the future background scenario with the Eco Parkway extension, the following results were established:

- The study intersections are forecast to operate at a LOS "E" or better except for the northbound movement at the Ida Street and Main Street intersection.
- The northbound movement intersection of Ida Street and Main Street is forecast to operate with a LOS "F", 177.0 seconds of delay, and a volume to capacity ratio of 1.28.

With the addition of Glenelg Phase 3 traffic to the Eco Parkway Scenario, the intersection of Ida Street and Main Street is forecast to operate with a maximum of 254.7 seconds of delay and a volume to capacity ratio of 1.46. Signalization is not warranted based on the future total volumes. If the Road Authority decides to implement signalization, the intersection is forecast to operate at LOS "B" with a v/c ratio of less than 0.79 for all movements under future total conditions. If the Road Authority decides to implement a roundabout, it is forecast that a roundabout would operate at LOS "A" with a 95$^{th}$ percentile queue length of 1 vehicle or less under the Eco Parkway future total volumes.

The analysis contained within this report was prepared using the Draft Plan prepared by MHBC on August 18$^{th}$, 2022. Any minor revisions to the development draft are not expected to affect the conclusions contained in this report.

In conclusion, the proposed development can be supported from a transportation operations and safety perspective, with the noted recommendations.

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# 2.0 Introduction

## 2.1 Background

C. F. Crozier and Associates Inc. (Crozier) was retained by Flato Dundalk Meadows Inc. (Client) to undertake a Traffic Impact Study (TIS) to support a Draft Plan of Subdivision Application for Glenelg Phase 3 (Subject Property) located in the west end of the Community of Dundalk, Township of Southgate, County of Grey. The Subject Property is located northeast of Phase 2 of the Glenelg Residential Development.

## 2.2 Development Proposal

The most recent Draft Plan for Glenelg Phase 3 includes 369 single detached dwelling units, 72 townhouse dwelling units, and 18 semi-detached dwelling units.

Access to the subject property is proposed by three connections to the external road network; one through the White Rose Phase 3 Development (Bradley Street Extension) and two through Glenelg Phase1. Street A and Street B are proposed to extend westerly from the subject property to Corbett Street in Glenelg Phase 2, which has further connections to the two Glenelg Phase 1 site accesses. Bradley Street is proposed to be extended northerly into the subject property after the construction of the White Rose Phase 3 development.

**Figure 1** contains the Draft Plan prepared by MHBC dated August 18th, 2022.

## 2.3 Purpose and Scope

The purpose of the study is to assess the impacts of the proposed residential development on the boundary road network and to recommend the required remedial measures to mitigate the transportation impacts.

The scope of the study includes:

- Determine and assess the existing, future background, and future total traffic operations of the boundary road network.
- Forecast the trip generation and distribution of the proposed development.
- Assess and if necessary, recommend, changes in intersection traffic control.

The Township of Southgate peer reviewer confirmed the scope and assumptions noted in this report during pre-study consultations. **Appendix A** contains the Terms of Reference correspondence.

# 3.0 Existing Traffic Conditions

## 3.1 Development Lands

The subject property is currently vacant and is bound by existing residential land uses to the south, future residential developments to the west, and vacant agricultural land to the east and north. The subject property is approximately 33.27 ha, of which approximately 24.54 ha are proposed to be developed.

**Figure 2** illustrates the Site Location Plan.

## 3.2 Study Intersections

The following intersections have been included in the study area and were analysed under existing, future background, and future total traffic volume conditions:

- Glenelg Street and Ida Street.
- Dundalk Street and Glenelg Street.
- Ida Street and Main Street.
- Dundalk Street and Main Street.
- Main Street and Osprey Street.
- Main Street and Owen Sound Street.
- Osprey Street and Bradley Street.

## 3.3 Boundary Road Network

**Table 1** summarizes the characteristics of the boundary road network as illustrated in the Township of Southgate "Official Plan". For the purposes of this report, Ida Street, Dundalk Street, and Osprey Street are assumed to run north-south while Main Street and Glenelg Street are assumed to run east-west. **Figure 3** illustrates the existing traffic controls and lane configurations of the study intersections.

**Table 1: Boundary Road Network**

| Road | Direction | Lanes | Posted Speed (km/h) | Classification | Jurisdiction | Pedestrian Facilities | Cycling Facilities |
|---|---|---|---|---|---|---|---|
| Ida Street | North-south | 2 | 40 km/h | Local Road | Township of Southgate | None | None |
| Glenelg Street | East-west | 2 | 40 km/h | Local Road | Township of Southgate | One side sidewalk | None |
| Grey Road 9/ Main Street | East-west | 2 | 40 km/h | County Highway | County of Grey | Two side (McDowell to Dundalk Street, one side asphalt mountable curb from Dundalk Street to Ida Street) | Paved Shoulder west of Dundalk Street and east of Artemisia Street |
| Dundalk Street | North-south | 2 | Assumed 40 km/h | Local Road | Township of Southgate | None | Grey county CP rail trail to east of road |
| Grey Street | East-west | 2 | Assumed 40 km/h | Local Road | Township of Southgate | Sidewalk from Glenelg Street to CP Rail Trail | None |
| Osprey Street | North-south | 2 | Assumed 40 km/h | Local Road | Township of Southgate | One side sidewalk (Main Street to Bradley Street) | |
| Owen Sound Street | Skewed, assumed North-south | 2 | Assumed 40 km/h | Local Road | Township of Southgate | One side sidewalk | Paved shoulder one side |
| Bradley Street/ Toronto Street | East-west | 2 | Assumed 40 km/h | Local Road | Township of Southgate | One side sidewalk (to 70 m east of Osprey Street) | |

## 3.4 Active Transportation

Sidewalk and cycling facilities are summarized in **Table 1**. Grey Bruce Regional Transit operates two peak hour period routes with the nearest stop located at the Dundalk Arena (approximately 1 km east of the site). **Route 1** operates primarily on Highway 10 from Dundalk to Owen Sound. **Route 2** operates on Highway 10 from Dundalk into Orangeville.

## 3.5 Traffic Data

Turning movement counts at the study intersections were undertaken by Spectrum Traffic Data Inc. from 6:00 a.m. to 10:00 a.m. and from 3:00 p.m. to 7:00 p.m. on Tuesday June 7, 2022. **Appendix B** contains the turning movement count data. **Figure 4** illustrates the existing traffic volumes.

Peak hour factors (PHF) associated with the weekday a.m. and p.m. peak hours were calculated for each study area intersection based on the existing traffic volumes. **Table 2** summarizes the PHFs used at each intersection in the operations analysis. The Synchro default peak hour factor of 0.92 was used for the new intersection of the Site Access and Glenelg Street which is consistent with nearby review agency guidelines for proposed intersections.

**Table 2: Peak Hour Factors**

| Intersection | Peak Hour | Peak Hour Factor |
|---|---|---|
| Ida Street and Glenelg Street | Weekday A.M.<br>7:45 A.M. – 8:45 A.M. | 0.76 |
| | Weekday P.M.<br>4:45 P.M. – 5:45 P.M. | 0.80 |
| Dundalk Street and Glenelg/Grey Street | Weekday A.M.<br>8:15 A.M. – 9:15 A.M. | 0.75 |
| | Weekday P.M.<br>3:00 P.M. – 4:00 P.M. | 0.89 |
| Ida Street and Grey Road 9(Main Street) | Weekday A.M.<br>8:00 A.M. – 9:00 A.M. | 0.82 |
| | Weekday P.M.<br>3:45 P.M. – 4:45 P.M. | 0.95 |
| Dundalk Street and Main Street | Weekday A.M.<br>8:15 A.M. – 9:15 A.M. | 0.72 |
| | Weekday P.M.<br>3:45 P.M. – 4:45 P.M. | 0.95 |
| Osprey Street and Main Street | Weekday A.M.<br>8:15 A.M. – 9:15 A.M. | 0.77 |
| | Weekday P.M.<br>3:00 P.M. – 4:00 P.M. | 0.90 |
| Osprey Street and Toronto Street/Bradley Street | Weekday A.M.<br>8:30 A.M. – 9:30 A.M. | 0.65 |
| | Weekday P.M.<br>3:15 P.M. – 4:15 P.M. | 0.70 |
| Owen Sound Street and Main Street | Weekday A.M.<br>8:30 A.M. – 9:30 A.M. | 0.82 |
| | Weekday P.M.<br>3:15 P.M. – 4:15 P.M. | 0.88 |

## 3.6 Intersection Operations

The operations of the study intersections were analyzed using existing traffic volumes and Synchro 11. Level of Service (LOS) definitions have been included in **Appendix C**. Detailed capacity analysis worksheets are included in **Appendix D**. **Table 3** summarizes the existing traffic operations.

**Table 3: Existing Traffic Operations**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay (seconds) | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Glenelg Street | Stop (T-intersection) | A.M. | A | 8.8 s | 0.02 (WB) |
| | | P.M. | A | 8.7 s | 0.03 (WB) |
| Dundalk Street and Glenelg/Grey Street | Stop (T-intersection[3]) | A.M. | A | 8.6 s | 0.02 (NB) |
| | | P.M. | A | 8.7 s | 0.02 (NB) |
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | B | 11.7 s | 0.06 (NB) |
| | | P.M. | B | 11.2 s | 0.11 (NB) |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | B | 11.3 s | 0.10 (SB) |
| | | P.M. | B | 10.6 s | 0.06 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | B | 12.9 s | 0.07 (SB) |
| | | P.M. | B | 12.5 s | 0.05 (SB) |
| Osprey Street and Toronto Street/Bradley Street | Stop (All-way) | A.M. | A | 7.1 s | 0.05 (WB) |
| | | P.M. | A | 7.1 s | 0.08 (NB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | B | 12.8 s | 0.09 (SB) |
| | | P.M. | B | 13.2 s | 0.10 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. In addition, all v/c ratios for movements greater than 0.85 are outlined and highlighted.*

*Note [3]: To remain consistent with the Glenelg Phase 2 TIS, the volumes on the west approach of Grey Street were shifted so the intersection could be analyzed as a T -intersection. The simulation software cannot assess the existing 4-legged intersection.*

To remain consistent with the Glenelg Phase 2 TIS, the traffic volumes to/from the west leg of Grey Street were shifted to Glenelg Street to allow the intersection to assessed using modelling software. The modelling software is unable to interpret an intersection with two free-flow legs on the north side of the intersection and two stop-controlled legs on the south side. It is noted the west leg of Grey Street has very low traffic volumes as it serves a few private residences and a municipal operations yard.

The study area intersections are estimated to operate an acceptable level of service (LOS "B" or better) and no critical movements are noted under existing traffic conditions. The maximum control delay is estimated to be 13.2 seconds (Southbound movement at Owen Sound Street and Main Street) and the largest volume-to-capacity (v/c) ratio is estimated to be 0.11(northbound movement at Ida Street and Grey Road 9). These metrics show that the study intersections have reserve capacity for future increases in traffic volumes.

# 4.0 Future Background Conditions

## 4.1 Horizon Years

As confirmed with Township peer reviewer, Triton, during pre-study consultations, horizon years of 2027 and 2032 were assessed which represent five and ten years from the study date.

## 4.2 Growth Rate

To remain consistent with the Glenelg Phase 1 TIS, the Glenelg Phase 2 TIS, and the Edgewood Greens TIS, a growth rate of 1.5 percent was used to forecast future traffic volumes on the boundary road network.

It is acknowledged that Grey County Transportation Master Plan (Cole Engineering Group and C.C. Tatham & Associates, 2014) used a growth rate of 1.0 percent.

## 4.3 Boundary Road Network Improvements

Based on a review of Southgate's Development Charges Background Study and published planned roadworks, mostly minor roadworks that would not impact the findings of this report (ie. no changes to lane configurations or traffic control) were listed except for Eco Parkway. Eco Parkway was the only identified improvement that could impact the findings of this report. The impacts of implementing Eco Parkway and the associated development lands were assessed in an additional scenario as requested by Township peer reviewer during pre-study consultation in **Section 7.0** of this study. **Appendix E** contains excerpts from the Eco Parkway TIS titled "Industrial Access Road Grey Road 9 and Ida Street Traffic Impact Study" (Triton Engineering, September 2020).

Based on a review of Grey County's Development Charges, Capital Works Schedule and Transportation Master Plan, the planned urban rehab for Main Street from Ida Street to Artemesia Street scheduled for 2023 was the only identified improvement that may impact the study area road network. It was assumed that this work would not impact the findings of this report (ie. no changes to lane configurations or traffic control).

## 4.4 Background Developments

The background developments identified for inclusion in this study by the Township peer reviewer during pre-study consultation are summarized in **Table 4**. **Figure 5** to **Figure 9** illustrates the forecast background development traffic for each identified background development. **Figure 10** illustrates the forecast traffic volumes of all background developments.

**Table 4: Background Developments**

| Background Development | Number of Units | Opening Horizon Year of Analysis | Reference |
|---|---|---|---|
| Edgewood Greens | 275[1] Single Detached Dwelling Units and 157[1] Townhouse Dwelling Units | Assumed 2027 | C. F. Crozier & Associates Inc. (February 2021) |
| Glenelg Phase 1 | 118 Single Detached dwelling Units and 65 Townhouse Dwelling Units | Assumed 2027 | C. F. Crozier & Associates Inc. (September 2020) |
| Glenelg Phase 2 | 89 Single detached dwelling units and 66 Townhouse Dwelling Units | 2025 | C. F. Crozier & Associates Inc. (September 2020) |
| White Rose Phase 3 | 88 Single Family Detached, 66 Townhouse Dwelling Units, and 66 Senior Adult Housing | 2025 | Triton Engineering Services Limited (September 2020) |

*Note[1]: The development team identified the number of closed units as these trips are included in the existing traffic volumes.*

### 4.4.1. Edgewood Greens

Edgewood Greens Development is a mixed-use development located southeast of Glenelg Phase 3. The development is still under construction; however, many of the residential units are currently occupied. Updated residential trip generation rates were estimated for the unoccupied units using the Institute of Transportation Engineers (ITE) Trip Generation Manual 11th Edition. The commercial trip generation estimates were copied from the Edgewood Greens TIS update (Crozier, February 2021). The development is assumed to be built-out prior to the 2027 horizon year. **Table 5** summarizes the trip generation estimates.

**Table 5: Edgewood Greens Trip Generation**

| Land Use | Units/GFA | Peak Hour | Trip Type | Trips Generated | | |
|---|---|---|---|---|---|---|
| | | | | Inbound | Outbound | Total |
| LUC 210: Single Family Detached Housing[1] | 275 Units | A.M. | Primary | 49 | 138 | 187 |
| | | P.M. | | 162 | 95 | 257 |
| LUC 215: Attached Multifamily Housing [1] | 157 Units | A.M. | Primary | 24 | 52 | 76 |
| | | P.M. | | 51 | 39 | 90 |
| LUC 820: Shopping Centre[2] | 15,586 ft[2] | A.M. | Primary | 10 | 7 | 17 |
| | | | Pass-by | 0 | 0 | 0 |
| | | P.M. | Primary | 21 | 23 | 44 |
| | | | Pass-by | 11 | 12 | 23 |
| **Total** | | **A.M.** | **Primary** | **82** | **198** | **280** |
| | | | **Pass-by** | **0** | **0** | **0** |
| | | **P.M.** | **Primary** | **55** | **82** | **134** |
| | | | **Pass-by** | **11** | **11** | **12** |

*Note [1]: The trip generation for the residential units was updated with the fitted curve equations noted in the ITE Trip Generation Manual 11th Edition for the unoccupied unit count.*

*Note [2]: The trip generation for the commercial block was adopted from the fitted curve equation given in ITE Trip Generation Manual 10th Edition as per the Edgewood Greens, Traffic Impact Study Update (Crozier, January 2020).*

The trips generated by the Edgewood Greens development were assigned to the boundary road network based on the distribution described in the Edgewood Greens TIS update (Crozier, February 2021). Most trips are expected to travel to/from Highway 10 with some trips assigned to the west of Dundalk at the intersection of Osprey and Main Street. To extend the trip distribution past Ida Street it was assumed that the trips assigned to Main Street would continue straight on Main Street at the intersection with Ida Street and the intersection with Dundalk Street.

Relevant excerpts from the Edgewood Greens TIS update (Crozier, February 2021) have been included in **Appendix E**. The trip assignment for Edgewood Greens development is illustrated in **Figure 5** and **Figure 6**.

4.4.2. Glenelg Phase 1

Glenelg Phase 1 is a residential development located on to the west side of Glenelg Phase 3. The development is proposed to consist of 118 single detached dwelling units and 65 townhouse dwelling units and access is proposed though two all-move accesses to Glenelg Street. However, it is noted that the traffic study was analyzed with only one full move access. To remain consistent with the Glenelg Phase 1 TIS, the Glenelg Phase 2 TIS and this study assigned the site-generated traffic to the one access. It was assumed the development would be completed prior to the 2027 horizon year. **Table 6** summarizes the trip generation estimates noted in the Glenelg Phase 2 TIS Study (Crozier, September 2020).

**Table 6: Glenelg Phase 1 Trip Generation**

| Development | Unit Type | Number of Units | Roadway Peak Hour | Number of Trips | | |
|---|---|---|---|---|---|---|
| | | | | Inbound | Outbound | Total |
| Glenelg Phase 1 | LUC 210: Single Family Detached Housing | 118 | Weekday A.M. | 22 | 67 | 89 |
| | | | Weekday P.M. | 75 | 44 | 119 |
| | LUC 220: Multifamily Housing (Low-Rise) | 65 | Weekday A.M. | 7 | 25 | 32 |
| | | | Weekday P.M. | 25 | 15 | 40 |
| **Total** | | | **Weekday A.M.** | **29** | **92** | **121** |
| | | | **Weekday P.M.** | **100** | **59** | **159** |

The Glenelg Phase 1 trip distribution and trip assignment was taken from the Glenelg Phase 2 TIS (Crozier, September 2020). Traffic volumes were balanced through the study area intersections that were not included in the Glenelg Phase 2 TIS. **Appendix E** contains the Glenelg Phase 2 TIS excerpts. **Appendix E**. The trip assignment for Glenelg Phase 1 is illustrated in **Figure 7**.

4.4.3. Glenelg Phase 2

The Glenelg Phase 2 development is located to the west of Glenelg Phase 3. Glenelg Phase 2 connects to Glenelg Street through Glenelg Phase 1. Based on Glenelg Phase 2 Traffic Impact Study (Crozier, September 2020), the development is proposed to include 89 single detached dwelling units and 66 townhouse dwelling units. It is noted the unit counts are conservative as the number of units has been reduced to allow for the construction of future roadways not illustrated in the draft plan referenced by the Glenelg Phase 2 TIS. The unit count in the Glenelg Phase 2 TIS is overstated by 2 single detached dwelling units and 4 townhouse dwelling units. **Table 7** summarizes the trip generation estimates.

**Table 7: Glenelg Phase 2 Trip Generation**

| Use | Peak Hour | Number of Trips | | |
|---|---|---|---|---|
| | | Inbound | Outbound | Total |
| LUC 210: Single Family Detached Housing (89 Units) | Weekday A.M. | 17 | 51 | 68 |
| | Weekday P.M. | 57 | 34 | 91 |
| LUC 220: Multifamily Housing (Low-Rise) (66 Units) | Weekday A.M. | 7 | 25 | 32 |
| | Weekday P.M. | 26 | 15 | 41 |
| **Total** | **Weekday A.M.** | **24** | **76** | **100** |
| | **Weekday P.M.** | **83** | **49** | **132** |

*Note: The trip generation above was adopted from the fitted curve equation given in ITE Trip Generation Manual 10th Edition as per the Glenelg Phase 2 Traffic Impact Study (Crozier, September 2020).*

The trip assignment was taken from the Glenelg Phase 2 TIS (Crozier, September 2020). Traffic volumes were balanced through the study area intersections that were not included in the Glenelg Phase 2 TIS. **Figure 8** illustrates the Glenelg Phase 2 trip assignment.

4.4.4. White Rose Phase 3

The White Rose Phase 3 development is located to the south of the subject site. Based on the White Rose Phase 3 Traffic Impact Study (Triton Engineering Services, September 2020), the development is proposed to consist of 33 single detached dwelling units, 24 townhouse dwelling units, and 34 seniors dwelling units. **Table 9** summarizes the trip generation estimates.

**Table 9: White Rose Phase 3 Trip Generation**

| Use | Peak Hour | Number of Trips | | |
|---|---|---|---|---|
| | | Inbound | Outbound | Total |
| LUC 210: Single Family Detached Housing (89 Units) | Weekday A.M. | 8 | 23 | 31 |
| | Weekday P.M. | 23 | 13 | 36 |
| LUC 230: Residential Condominium/ Townhouse (66 Units) | Weekday A.M. | 3 | 14 | 17 |
| | Weekday P.M. | 13 | 6 | 19 |
| LUC 252: Senior Adult Housing (Attached) (66 Units) | Weekday A.M. | 2 | 3 | 5 |
| | Weekday P.M. | 5 | 1 | 6 |
| **Total** | **Weekday A.M.** | **13** | **40** | **53** |
| | **Weekday P.M.** | **41** | **20** | **61** |

*Note: The trip generation above was adopted from the fitted curve equation given in ITE Trip Generation Manual 10th Edition as per the White Rose Phase 3 TIS (Triton, September 2020).*

The trips assignment for the White Rose Phase 3 was taken from the White Rose Phase 3 TIS. Traffic volumes were balanced through the study area intersections that were not included in the White Rose Phase 3 TIS. **Figure 9** illustrates the White Rose Phase 3 trip assignment and **Appendix E** contains White Rose TIS Excerpts.

## 4.5 Intersection Operations

The operations of the study intersections were analyzed based on the 2027 and 2032 future background traffic volumes. The background volumes, which include the generalized background growth and the identified background developments, are illustrated in **Figure 11** and **Figure 12** for the 2027 and 2032 horizon years, respectively. **Appendix C** contains the Level of Service definitions and **Appendix D** contains the detailed capacity analysis worksheets. **Table 8** and **Table 9** summarize the 2027 and 2032 future background traffic operations, respectively.

**Table 8: 2027 Future Background Traffic Operations**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Glenelg Street | Stop (T-intersection) | A.M. | A | 9.1 s | 0.07 (WB) |
| | | P.M. | A | 9.1 s | 0.06 (WB) |
| Dundalk Street and Glenelg/Grey Street | Stop (T-intersection) | A.M. | B | 11.0 s | 0.11 (NB) |
| | | P.M. | B | 10.7 s | 0.21 (NB) |
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | B | 12.4 s | 0.10 (SB) |
| | | P.M. | B | 13.2 s | 0.16 (NB) |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | D | 31.5 s | 0.64 (SB) |
| | | P.M. | C | 16.2 s | 0.28 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | C | 23.1 s | 0.27 (NB) |
| | | P.M. | C | 20.8 s | 0.19 (NB) |
| Glenelg Street and Glenelg Site Access | Stop (T-intersection) | A.M. | A | 10.0 s | 0.20 (SB) |
| | | P.M. | B | 10.5 s | 0.15 (SB) |
| Osprey Street and Toronto Street/Bradley Street | Stop (All-way) | A.M. | A | 7.4 s | 0.11 (WB) |
| | | P.M. | A | 7.4 s | 0.14 (NB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | C | 18.4 s | 0.22 (SB) |
| | | P.M. | C | 20.1 s | 0.23 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. All v/c ratios for movements greater than 0.85 are outlined and highlighted.*

**Table 9: 2032 Future Background Traffic Operations**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Glenelg Street | Stop (T-intersection) | A.M. | A | 9.1 s | 0.07 (WB) |
| | | P.M. | A | 9.2 s | 0.07 (WB) |
| Dundalk Street and Glenelg/Grey Street | Stop (T-intersection) | A.M. | B | 11.1 s | 0.12 (NB) |
| | | P.M. | B | 10.8 s | 0.21 (NB) |
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | B | 12.8 s | 0.11 (SB) |
| | | P.M. | B | 13.6 s | 0.18 (NB) |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | E | 37.4 s | 0.70 (SB) |
| | | P.M. | C | 16.9 s | 0.30 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | C | 25.2 s | 0.30 (NB) |
| | | P.M. | C | 21.7 s | 0.20 (NB) |
| Glenelg Street and Glenelg Site Access | Stop (T-intersection) | A.M. | B | 10.0 s | 0.20 (SB) |
| | | P.M. | B | 10.5 s | 0.15 (SB) |
| Osprey Street and Toronto Street/Bradley Street | Stop (All-way) | A.M. | A | 7.5 s | 0.11 (WB) |
| | | P.M. | A | 7.4 s | 0.14 (NB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | C | 19.6 s | 0.24 (SB) |
| | | P.M. | C | 21.2 s | 0.32 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. All v/c ratios for movements greater than 0.85 are outlined and highlighted.*

The study intersections were forecast to continue operating with a LOS "C" or better in the weekday a.m. and p.m. peak hours under 2032 future background traffic volume conditions, except for the intersection of Dundalk Street and Main Street. The southbound movement on Dundalk Street is considered critical and is forecast to operate at a LOS "E" during the weekday a.m. peak hour. It is noted that existing peak hour factors (PHF) were applied to future traffic conditions, which range from 0.65 to 0.82 during the a.m. peak hour. As traffic volumes increase, the PHF will likely increase. Due to the large number of future nearby background developments that are expected to be constructed, it is recommended the road authority continues to monitor the traffic operations.

The Glenelg Phase 1 Site Access is anticipated to operate with a LOS "B" with a maximum control delay of 10.5 seconds and a maximum v/c ratio of 0.20(SB). The metrics indicate that the site access has reserve capacity for increases in traffic volumes.

# 5.0 Site Generated Traffic

## 5.1 Trip Generation

Development of the subject property will result in additional vehicles on the boundary road network above background conditions. The trip generation of the development was forecast using the fitted curve equations provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Per the most recent draft plan, the development is proposed to consist of 369 single detached dwelling units, 72 townhouse dwelling units, and 18 semi-detached dwelling. Accordingly, LUC 210 "Single-Family Detached Housing", and LUC 215 "Single Family Attached Housing" were used to forecast trips generated by the site. **Table 10** the residential trip generation of the subject property. **Appendix F** contains relevant excerpts from the ITE Trip Generation Manual.

**Table 10: Site Trip Generation**

| | Peak Hour | Number of Trips | | |
|---|---|---|---|---|
| | | Inbound | Outbound | Total |
| LUC 210 'Single Family Homes' (369 Units) | Weekday A.M. | 63 | 181 | 244 |
| | Weekday P.M. | 214 | 125 | 339 |
| LUC 215 'Single Family Attached Housing' (90 Units) | Weekday A.M. | 13 | 28 | 41 |
| | Weekday P.M. | 28 | 22 | 50 |
| **TOTAL** | **Weekday A.M.** | **76** | **209** | **285** |
| | **Weekday P.M.** | **242** | **147** | **389** |

## 5.2 Trip Distribution and Assignment

Trips generated by Glenelg Phase 3 were distributed to the boundary road network similar to what was applied in the Glenelg Phase 1 TIS and Glenelg Phase 2 TIS. The trip distribution was based on Transportation Tomorrow Survey (TTS) data. The TTS is a comprehensive survey of transportation characteristics in the Golden Horseshoe, and Simcoe County areas. TTS data is unavailable for the Community of Dundalk; however, data was available for the Township of Melancthon which is adjacent to Dundalk. This data is considered representative of the subject area.

TTS Data has been included in **Appendix J**. The trip distribution is as follows:

- 10 % to/from the north on Ida Street
  - 5 % Via Glenelg Phase 1 Site Access
  - 5 % Via Grey Street
- 10 % to/from the west on Grey Road 9 (Main Street) via Ida Street and via Grey Street
- 60 % to/from the south on Highway 10 via Bradley Street
  - 60 % westbound right movements at Owen Sound Street
  - 30 % southbound left movements at Owen Sound Street and 30% southbound left
- 20 % to/from Dundalk (downtown)
  - 15 % to/from the west on Toronto Street
  - 5 % to/from the west on Main Street at Dundalk Street

It is noted that 20% of the site-generated traffic volumes are expected to travel through the community outside of the study area road network.

The Subject Property is proposed to connect to the boundary road network through the Bradley Street extension and two accesses through Glenelg Phase 1. The Subject Property will directly

connect to Glenelg Phase 2 which then connects to the Glenelg Phase 1 accesses. Glenelg Phase 3 was analyzed with the Bradley Street extension and one access through Glenelg Phase 1. This provides a conservative analysis as two accesses have already been constructed for Glenelg Phase 1.

The trips generated by the proposed development were assigned to the boundary road network per the distributions illustrated in **Figure 13**. **Figure 14** illustrates the site-generated trip assignment.

# 6.0 Total Future Conditions

## 6.1 Basis of Assessment

The total traffic volumes consist of the site-generated and background traffic volumes. **Figure 15** and **Figure 16** illustrate the 2027 and 2032 total traffic weekday a.m. and p.m. traffic volumes, respectively.

## 6.2 Signal Justification

A signal warrant analysis was undertaken for the Dundalk Street and Main Street intersection and at the Owen Sound Street and Main Street intersection using the 2032 future total traffic volumes. The analysis followed the procedures specified in Chapter 4 of the "Ontario Traffic Manual – Book 12" (OTM Book 12), March 2012 for Justification 1 (Minimum Vehicle Volume), Justification 2 (Delay to Cross Traffic), and Justification 3 (Volume/Delay Combination). The future total peak hour volumes were assigned to the 8-hours based on the percentage of the peak hour traffic volumes established from the existing 8-hour traffic data.

The results of the signal warrant analyses are summarized in **Table 11** and **Table 12** the warrant sheets have been included in **Appendix G**.

**Table 11: Dundalk Street - Signal Warrant Analysis Results**

| Justification | | Section Percent | Signal Justified |
|---|---|---|---|
| 1. Minimum Vehicular Volume | A. Total Volume | 48% | No |
| | B. Crossing volume | 12% | |
| 2. Delay to Cross Traffic | A. Main Road | 44% | No |
| | B. Crossing Road | 27% | |
| 3. Combination | A. Justification 1 | 12% | No |
| | B. Justification 2 | 27% | |

*Note[1]: Dundalk Street and Main Street is a "T" intersection which requires the minimum section percentage requirements to be increased by 50%.*

**Table 12: Owen Sound Street - Signal Warrant Analysis Results**

| Justification | | Section Percent | Signal Justified |
|---|---|---|---|
| 1. Minimum Vehicular Volume | A. Total Volume | 95% | No |
| | B. Crossing volume | 36% | |
| 2. Delay to Cross Traffic | A. Main Road | 93% | No |
| | B. Crossing Road | 99% | |
| 3. Combination | A. Justification 1 | 36% | No |
| | B. Justification 2 | 93% | |

*Note[1]: Owen Sound Street and Main Street is a "T" intersection which requires the minimum section percentage requirements to be increased by 50%.*

The results indicate that the Dundalk Street and Main Street intersection and the Owen Sound Street and Main Street intersection do not meet the OTM Book 12 signal warrant requirements.

## 6.3 Intersection Operations

The operations of the study intersections were analyzed based on the 2027 and 2032 total traffic volumes illustrated in **Figures 15** and **Figure 16**. **Table 13** and **Table 14** outline the 2027 and 2032 horizon year future total traffic Levels of Service, respectively. Level of Service definitions have been included in **Appendix C** and detailed capacity analyses worksheets are included in **Appendix D.**

**Table 13: 2027 Future Total Levels of Service**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Glenelg Street | Stop (T-intersection) | A.M. | A | 9.5 s | 0.13 (WB) |
| | | P.M. | A | 9.7 s | 0.11 (WB) |
| Dundalk Street and Glenelg/Grey Street | Stop (T-intersection) | A.M. | B | 11.7 s | 0.13 (NB) |
| | | P.M. | B | 11.6 s | 0.24 (NB) |
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | B | 12.2 s | 0.14 (SB) |
| | | P.M. | B | 14.0 s | 0.18 (NB) |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | D | 33.5 s | 0.67 (SB) |
| | | P.M. | C | 16.8 s | 0.30 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | D | 30.6 s | 0.48 (SB) |
| | | P.M. | C | 24.6 s | 0.29 (SB) |
| Glenelg Street and Glenelg Site Access | Stop (T-intersection) | A.M. | B | 10.5 s | 0.23 (SB) |
| | | P.M. | B | 11.2 s | 0.18 (SB) |
| Osprey Street and Toronto Street/Bradley Street | Stop (All-way) | A.M. | A | 9.7 s | 0.41 (WB) |
| | | P.M. | A | 9.6 s | 0.39 (NB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | D | 29.0 s | 0.51 (SB) |
| | | P.M. | D | 31.4 s | 0.48 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. All v/c ratios for movements greater than 0.85 are outlined and highlighted.*

**Table 14: 2032 Future Total Levels of Service**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Glenelg Street | Stop (T-intersection) | A.M. | A | 9.5 s | 0.13 (WB) |
| | | P.M. | A | 9.8 s | 0.11 (WB) |
| Dundalk Street and Glenelg/Grey Street | Stop (T-intersection) | A.M. | B | 11.8 s | 0.14 (NB) |
| | | P.M. | B | 11.7 s | 0.25 (NB) |
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | B | 12.5 s | 0.15 (SB) |
| | | P.M. | B | 14.6 s | 0.20 (NB) |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | E | 40.0 s | 0.73 (SB) |
| | | P.M. | C | 17.6 s | 0.32 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | D | 34.8 s | 0.52 (SB) |
| | | P.M. | D | 26.7 s | 0.32 (SB) |
| Glenelg Street and Glenelg Site Access | Stop (T-intersection) | A.M. | B | 10.5 s | 0.23 (SB) |
| | | P.M. | B | 11.3 s | 0.18 (SB) |
| Osprey Street and Toronto Street/Bradley Street | Stop (All-way) | A.M. | A | 9.7 s | 0.42 (WB) |
| | | P.M. | A | 9.7 s | 0.30 (WB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | D | 32.7 s | 0.55 (SB) |
| | | P.M. | E | 35.2 s | 0.52 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. All v/c ratios for movements greater than 0.85 are outlined and highlighted.*

The intersections are generally forecast to operate at acceptable levels of service during the weekday a.m. and p.m. peak hours with minor increases in delay and v/c ratios noted with the addition of site-generated traffic volumes. The following critical movements are noted:

- Dundalk Street and Main Street: Southbound approach.
- Owen Sound Street and Main Street: Southbound approach.

The southbound approach at the Dundalk Street and Main Street intersection is forecast to operate at LOS "E" during the weekday a.m. peak hour. The critical southbound movement is forecast to experience an increase in control delay of up to 2.6 seconds and an increase in v/c ratio of up to 0.03 over future background conditions. As previously noted, traffic signals are not warranted at the study area intersections and poor operations are forecast under background conditions. Due to multiple proposed developments in the area, it is recommended that the road authority continue to monitor the operations of the intersection.

The southbound approach at the Owen Sound Street and Main Street intersection is forecast to operate at LOS "E" during the weekday p.m. peak hour. The critical southbound movement is

forecast to experience an increase in the control delay of up to 14.0 seconds and an increase in the v/c ratio of up to 0.31 when compared to the future background operations. Due to multiple proposed developments in the area, it is recommended that the road authority continue to monitor the operations of the intersection.

The Glenelg Site Access intersection with Glenelg Street is forecast to operate at LOS "B" during the weekday a.m. and p.m. peak hours. The maximum control delay is anticipated to increase by 0.8 s and the maximum volume to capacity ratio is expected to increase by 0.03 with the addition of site-generated traffic volumes when compared to the future background operations.

### 6.4 Qualitative Impacts on Connecting Roadways

After development of Glenelg Phase 3, Bradley Street and Grey Street are forecast to operate well within the capacities of a local roadway. The forecast total traffic volumes on Bradley Street are between 150-200 and the forecast total traffic volumes on Grey Street are between 85-100. Local roadways typically operate with 400 vehicles hour per lane or less during the a.m. and p.m. peak hours.

Residents of Glenelg Phase 3 will be able to access Main Street using non-vehicular methods of travel by at least one of the nearby existing roadways. It is assumed that the proposed roadways that are part of White Rose Phase 3 and Glenelg Phase 3 will provide sidewalk connections to existing sidewalks on Tod Crescent, Artemisia Street, and Corbett Street. As many of the existing roadways near the subject property do not have existing continuous sidewalks, such as on Bradley Street, it is recommended that the Township includes sidewalks on at least one side of the road during future reconstruction projects.

Corbett Street (formerly Street A) will be classified as a local roadway. Corbett Street is planned to provide a sidewalk connection to the recently constructed sidewalks in Glenelg Phase 1. It is assumed that Glenelg Phase 3 will provide sidewalk connections from the proposed residential units to Corbett Street. It is anticipated that the proposed development will result in 15 and 18 additional two-way trips on Corbet Street in the a.m. and p.m. peak hours, respectively. This is anticipated to have negligible impacts on the neighbourhood.

## 7.0 Scenario: Eco Parkway

The Eco Parkway extension is an industrial access road running east-west parallel to Main Street from Highway 10 to Ida Street. The industrial access road will be classed as an arterial roadway. The lands on both sides of Eco Parkway have been designated for industrial use. A Traffic Impact Study for the Eco Parkway (formally Industrial Access Road) was completed by Triton Engineering as part of the environmental assessment (September 2017). **Attachment F** contains the Eco Parkway TIS excerpts. It is recognized that the TIS referred to the proposed roadway as Industrial Access Road however the most recent naming is Eco Parkway.

### 7.1 Redistribution of Existing Volumes

Construction of the Eco Parkway extension will provide a bypass to Dundalk and is expected to reroute existing traffic. For the purposes of their study and to remain consistent with the environmental assessment, this study and Triton engineering assumed that 30% of the traffic on Grey Road 9 through Dundalk would use Eco Parkway to bypass the community. Triton also assumed that truck traffic currently going through Dundalk would use Eco Parkway to bypass Main Street or access the industrial lands.

To remain consistent with the Triton Industrial Road TIS, existing traffic volumes, which includes background traffic growth, were redistributed as follows:

- 30 % of southbound left vehicles will complete southbound through movements
- 30 % of eastbound through vehicles will complete eastbound right movements
- 30 % of westbound through vehicles will complete northbound left movements
- 30 % of westbound right vehicles will complete northbound through movements

Trips from the background developments were not re-distributed based on the Eco Parkway construction because most of the developments are located to the east of Eco Parkway and would use Main Street. It should be noted that most new developments are residential while the proposed site is industrial, therefore some synergies will most likely occur however this was not investigated. Trips may have been counted in both the industrial site generated trips and background development generated trips this was done to ensure a conservative analysis. **Figure 17** illustrates the combined adjusted vehicular volumes.

## 7.2 Eco Parkway Site Generated Trips

The development of the industrial area serviced by the Eco Parkway extension is anticipated to result in new trips to the boundary road network. The full build out of the Eco Parkway extension industrial lands was assumed to be completed prior to the 2032 horizon year, so the trip generation associated with full build-out has been used in this analysis.

The Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition (ITE code 130 - Industrial Park) was used in the Tritons TIS (September 2017). ITE Code 130 - Industrial Park provided a conservative trip generation for the unknown types of development surrounding the Eco Parkway Extension and is consistent with the Eco Parkway TIS. The trips were estimated using an area of 259.75 acres and Triton Engineering assumed that all trips generated were primary trips.

**Table 15** summarizes the trip generation of the site. The trip generation identified in the Eco Parkway TIS was used in this analysis. **Appendix E** contains relevant excerpts from the Triton Engineering Industrial Eco Parkway TIS (September 2017).

**Table 15: Eco Parkway Industrial Lands Trip Generation**

| Peak Hour | Number of Trips | | |
|---|---|---|---|
| | Inbound | Outbound | Total |
| Weekday A.M. | 1,142 | 234 | 1,376 |
| Weekday P.M. | 266 | 1,000 | 1,266 |

The development of the industrial lands surrounding the Eco Parkway extension is estimated to generate approximately 1,376 and 1,266 two-way trips in the a.m. and p.m. peak hours, respectively. The trips were assigned to the road network consistent with the Triton TIS. In the Industrial Eco Parkway TIS, Triton assumed 70% of trips would travel towards Highway 10 on the Eco Parkway extension and the remainder would travel into Dundalk. **Figure 18** contains the Eco Parkway Industrial Lands Site Generated Traffic.

## 7.3 Eco Parkway Future Background Scenario

The operations of the study intersections were analyzed based on the 2032 future background traffic volumes illustrated in **Figure 19**. **Appendix C** contains the Level of Service definitions and **Appendix D** contains the detailed capacity analysis worksheets. **Table 16** outlines the 2032 future background

traffic operations.

**Table 16: Eco Parkway Scenario - 2032 Future Background Levels of Service**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | F | 55.3 s | 0.74 (NB) |
| | | P.M. | F | 177.0 s | **1.28 (NB)** |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | E | 44.4 s | 0.75 (SB) |
| | | P.M. | C | 16.6 s | 0.29 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | C | 21.6 s | 0.32 (NB) |
| | | P.M. | C | 22.0 s | 0.20 (NB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | C | 20.6 s | 0.26 (SB) |
| | | P.M. | C | 21.1 s | 0.25 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. All v/c ratios for movements greater than 0.85 are outlined and highlighted.*

The study intersections are forecast to operate with a LOS "E" or better in the weekday a.m. and p.m. peak hours under 2032 future background traffic volumes conditions, except for the intersection of Ida Street and Main Street which is expected to operate at a LOS "F" during the weekday peak hours. The construction of the Eco Parkway extension is anticipated to detour traffic volumes from Main Street to Ida Street. The detoured traffic is forecast to slightly improves the p.m. peak hour operations and slightly reduces the a.m. peak hour operations at the intersections of Main Street with Dundalk Street, Osprey Street, and Owen Sound Street compared to general future background conditions.

The stop-controlled intersection of Ida Street and Main Street is expected to have a maximum control delay of 177.0 seconds (NB) and a maximum volume-to-capacity ratio of 1.28 (NB). When compared to the future background operations, this is a 163.4 second increase in delay which is caused by the increase in traffic from the proposed Eco Parkway extension and industrial lands. Potential mitigation measures are further discussed later in the report.

These metrics indicate that the boundary road network, with the exception of the Ida Street and Main Street intersection, have reserve capacity for increases in traffic volumes.

## 7.4 Eco Parkway Future Total Scenario

The operations of the study intersections were analyzed based on the 2032 total traffic volumes illustrated in **Figure 20**, which is based on the combined traffic volumes in **Figure 19** with the site generated traffic illustrated in **Figure 14**. **Table 18** outlines the 2032 horizon year future total traffic Levels of Service. Levels of Service definitions have been included in **Appendix C** and detailed capacity analyses worksheets are included in **Appendix D.**

**Table 17: Eco Parkway Scenario - 2032 Future Total Levels of Service**

| Intersection | Control | Peak Hour | Level of Service [1] | Control Delay | Critical v/c ratio [2] |
|---|---|---|---|---|---|
| Ida Street and Grey Road 9 (Main Street) | Stop (Two-way) | A.M. | F | 71.9 s | 0.82 (NB) |
| | | P.M. | F | 254.7 s | **1.46 (NB)** |
| Dundalk Street and Main Street | Stop (T-intersection) | A.M. | E | 48.1s | 0.79 (SB) |
| | | P.M. | C | 17.1 s | 0.32 (SB) |
| Osprey Street and Main Street | Stop (Two-way) | A.M. | E | 38.9 s | 0.56 (SB) |
| | | P.M. | D | 26.0 s | 0.31 (SB) |
| Owen Sound Street and Main Street | Stop (T-intersection) | A.M. | E | 35.8 s | 0.58 (SB) |
| | | P.M. | D | 34.1 s | 0.51 (SB) |

*Note [1]: The Level of Service of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The Level of Service of all-way stop-controlled intersection is based on the average delay per vehicle.*

*Note [2]: The critical v/c ratio is the maximum v/c ratio for movements at the intersection. All v/c ratios for movements greater than 0.85 are outlined and highlighted.*

The intersections are forecast to operate with a LOS "E" or better in the weekday a.m. and p.m. peak hours under 2032 future total traffic volume conditions, except for the intersection of Ida Street and Main Street. The northbound movement is forecast to operate at a LOS "F" during the weekday peak hours. Traffic signals are not warranted, and poor operations are forecast under future background conditions of the Eco Parkway Scenario as well. With multiple background developments proposed in the area, it is recommended that the road authority continue to monitor the operations at this intersection.

The southbound approach at the Dundalk Street and Main Street intersection is forecast to operate at a LOS "E" under future background conditions with and without the proposed Eco Parkway extension. A maximum volume to capacity ratio of 0.79 is forecast for the southbound movements which represents an increase of 0.04 when compared to the scenario's future background operations. Due to multiple proposed developments in the area, it is recommended that the road authority continue to monitor the operations of the intersection.

The southbound approach at the Osprey Street and Main Street intersection is forecast to operate at a LOS "E" under future total conditions with the proposed Eco Parkway extension. A maximum volume to capacity ratio of 0.56 is forecast for the southbound movements which represents an increase of 0.24 when compared to the scenario's future background operations. Due to multiple proposed developments in the area, it is recommended that the road authority continue to monitor the operations of the intersection.

The southbound approach at the Owen Sound Street and Main Street intersection is forecast to operate at a LOS "E" or better under future total conditions with and without the proposed Eco Parkway extension. It is noted that with the addition of the industrial developments adjacent to the Eco Parkway extension, the maximum volume to capacity ratio is forecast to be 0.58. This represents an increase of the v/c ratio by a maximum of 0.03 when compared to the scenario's future background operations. Due to multiple proposed developments in the area, it is recommended that the road authority continue to monitor the operations of the intersection.

7.4.1. Eco Parkway Future Total Scenario – Potential Improvement Measures

With the introduction of the Eco Parkway extension and full build-out of the industrial lands, the intersection of Ida Street and Main Street is forecast to operate at a LOS "F" under 2032 future background conditions. It is acknowledged that these metrics are associated with assumptions relating to 10 years of growth, multiple background developments, and expected trip distributions.

Consideration was given to implementing a roundabout at the Ida Street and Main Street intersection to alleviate poor operations. Township staff indicated a roundabout was preferred over signalization to mitigate poor intersection operations at this location. Using Arcady analysis software, it is forecast that a roundabout would operate at a LOS "A" with a 95th percentile queue length of 1 vehicle or less. **Attachment H** contains an overlay of a potential roundabout over the existing Ida Street and County Road 9 intersection. It is noted that additional land will be required to accommodate the roundabout and is presented as conceptual at this time.

Traffic signal warrants indicate that signalization of the intersection of Ida Street and Main Street is not warranted. However, improvements may be needed to address poor operations with the build-out of the Eco Parkway extension and industrial lands. Should the road authority proceed with signalizing the intersection, the intersection is forecast to operate at a LOS "B" with a v/c of less than 0.82 for all movements. In the signalized Eco Parkway scenario, no critical movements are noted with the addition of the Glenelg Phase 3 site generated traffic.

## 8.0 Conclusions

The detailed analysis contained within this report resulted in the following key findings:

- Intersection analysis of the existing traffic volumes indicates that all study intersections are operating at a Level of Service (LOS) "B" or better during the weekday a.m. and p.m. peak hours. The study intersections have capacity for increases in traffic volumes.

- Several background developments have been considered for the assessment of the background conditions. These developments include Glenelg Phase 1, Glenelg Phase 2, the unoccupied Edgewood Greens units, and White Rose Phase 3. Consideration was also given to the development of the industrial lands surrounding the proposed Eco Parkway extension in a Scenario, the findings will be summarized later in the conclusions.

- Intersection analysis of the 2032 future background traffic volumes indicates the following:

    - The southbound movement at the Dundalk Street and Main Street intersection is forecast to operate with a LOS "E" during the weekday a.m. and p.m. peak hours.
        - A maximum volume-to-capacity ratio of 0.70 (SB) and control delay 37.4 seconds are forecast.
    - The remaining study intersections are forecast to operate at a LOS "C" or better.

- The proposed development is estimated to generate 285 and 389 total two-way primary trips during the weekday a.m. and p.m. peak hours, respectively.

- Intersection analysis of the 2032 future total traffic volumes indicates the following:

    - The study intersections are forecast to continue operating with a LOS "B" or better in the weekday a.m. and p.m. peak hours under 2032 future background traffic volume conditions, except for the intersections of: Dundalk Street and Main Street, Osprey

Street and Main Street, and Owen Sound Street and Main Street. The intersection of Dundalk Street and Main Street is forecast to operate with an LOS "E" or better in the weekday a.m. and p.m. peak periods, respectively. A maximum control delay of 40.0 seconds, and a maximum volume-to-capacity ratio of 0.73 (SB).
    - When compared to 2032 future background operations, an increase in control delay of 2.6 seconds and the volume-to-capacity ratio is forecast to increase by 0.03.
  - The intersection of Osprey Street and Main Street is forecast to operate with an LOS "D" in the weekday a.m. and p.m. peak periods, respectively. A maximum control delay of 34.8 seconds, and a maximum volume-to-capacity ratio of 0.52 (SB).
    - When compared to 2032 future background operations, an increase in control delay of 9.6 seconds and a maximum change of 0.22 in the volume-to-capacity ratio is forecast.
  - The intersection of Owen Sound Street and Main Street is forecast to operate with an LOS "E" or better in the weekday a.m. and p.m. peak periods, respectively. A maximum control delay of 35.2 seconds and a maximum volume-to-capacity ratio of 0.55 (SB) are forecast.
    - When compared to 2032 future background operations, an increase in control delay of 14.0 seconds and a maximum change of 0.31 in the volume-to-capacity ratio is forecast.

- As requested in the Terms of Reference, a scenario analyzing the impacts of the Glenelg Phase 3 development with both the Eco Parkway extension and development of surrounding industrial lands was completed. The Scenario with the Eco Parkway extension and the proposed industrial development lands are estimated to produce 1376 and 1266 external two-way trips in the a.m. and p.m. peak hours, respectively. The Eco Parkway extension is also anticipated to reroute 30% of volumes on Main Street around downtown Dundalk.

- In the scenario with the Eco Parkway extension that excludes the Glenelg Phase 3 Land site generated traffic:

  - The study intersections are forecast to operate at a LOS "E" or better except for the northbound movement at the Ida Street and Main Street intersection.
  - The northbound movement intersection of Ida Street and Main Street is forecast to operate with a LOS "F", 177.0 seconds of delay, and a volume to capacity ratio of 1.28.

- With the addition of Glenelg Phase 3 traffic to the Eco Parkway Scenario:
  - The intersection of Ida Street and Main Street is forecast to operate with 254.7 seconds of delay and a volume to capacity ratio of 1.46.
    - Signalization is not warranted based on the future total volumes.
    - If the Road Authority decides to implement signalization, the intersection is forecast to operate at LOS "B" with a v/c ratio of less than 0.79 for all movements under future total conditions. In the signalized Eco Parkway scenario, there is no change in the critical volume-to-capacity ratio with the addition of the Glenelg Phase 3 site generated traffic.
    - Consideration was given to implementing a roundabout, it is forecast that a roundabout would operate at LOS "A" with a 95th percentile queue length of 1 vehicle or less under the Eco Parkway future total volumes.

The analysis contained within this report was prepared using the Draft Plan prepared by MHBC August 18th, 2022. Any minor revisions to the development draft is not expected to affect the conclusions contained in this report.

In conclusion, the proposed development can be supported from a transportation operations and safety perspective with the noted recommendations.

Respectfully submitted,

**C.F. CROZIER & ASSOCIATES INC.**

Emma Howlett, EIT
Engineering Intern, Transportation

**C.F. CROZIER & ASSOCIATES INC.**

Madeleine Ferguson, P.Eng.
Manager of Transportation

**C.F. CROZIER & ASSOCIATES INC.**

Stefan Hajgato, P.Eng.
Project Engineer, Transportation

MF/sh.eh

J:\1000\1060-Flato Dev\6220- Glenelg Expansion Lands\Reports\Traffic\6220_TIS.docx

# APPENDIX A

## Terms of Reference

## Emma Howlett

**From:** Dustin Lyttle <dlyttle@tritoneng.on.ca>
**Sent:** June 27, 2022 8:29 AM
**To:** Emma Howlett
**Subject:** RE: Glenelg Phase 3 - Dundalk North Subdivision

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Hi Emma,

That 2017 TIS you have referenced is the most recent. Essentially, they were done at the same time. Since the EA was schedule B, there is no ESR however the TIS is part of the Project File and contains all traffic work.

Thanks,
Dustin Lyttle

---

**From:** Emma Howlett <ehowlett@cfcrozier.ca>
**Sent:** June 23, 2022 3:50 PM
**To:** Dustin Lyttle <dlyttle@tritoneng.on.ca>
**Subject:** RE: Glenelg Phase 3 - Dundalk North Subdivision

Hi Dustin,

Thank you for your quick response.

We will look into a scenario for Eco park way completion, I found the 2017 Eco Parkway (Dundalk Industrial) TIS.

I understand the EA was completed after the TIS, would you have a copy of the EA or a more recent study that we should reference?

Cheers,

**Emma Howlett**, EIT | Engineering Intern
1 First Street, Suite 200 | Collingwood, ON L9Y 1A1
T: 705.446.3510


Crozier Connections:

**Read our latest news and announcements** here.

**From:** Dustin Lyttle <dlyttle@tritoneng.on.ca>
**Sent:** June 23, 2022 7:58 AM
**To:** Emma Howlett <ehowlett@cfcrozier.ca>
**Subject:** RE: Glenelg Phase 3 - Dundalk North Subdivision

Hi Emma,

No problem, please see attached TIS for White Rose Phase 3.

If you need anything else, please let me know.

Thanks,
Dustin Lyttle

---

**From:** Emma Howlett <ehowlett@cfcrozier.ca>
**Sent:** June 22, 2022 2:20 PM
**To:** Dustin Lyttle <dlyttle@tritoneng.on.ca>
**Subject:** RE: Glenelg Phase 3 - Dundalk North Subdivision

Hi Dustin,

Thank you for your quick response we have collected traffic data.

Would you have happen to have the Traffic Impact Study for White Rose Phase 3?

If not we have the site plan for our SWM works, I can use the associated trip generation and our distribution to include this in our analysis.

Cheers,

**Emma Howlett**, EIT | Engineering Intern
1 First Street, Suite 200 | Collingwood, ON L9Y 1A1
T: 705.446.3510


Crozier Connections:

**Read our latest news and announcements** here.

---

**From:** Dustin Lyttle <dlyttle@tritoneng.on.ca>
**Sent:** May 31, 2022 1:36 PM

**To:** Emma Howlett <ehowlett@cfcrozier.ca>
**Subject:** RE: Glenelg Phase 3 - Dundalk North Subdivision

Hi Emma,

See comments below for your consideration.

If you have any questions please let me know.

Thanks,
Dustin Lyttle

---

**From:** Emma Howlett <ehowlett@cfcrozier.ca>
**Sent:** May 30, 2022 12:26 PM
**To:** Dustin Lyttle <dlyttle@tritoneng.on.ca>
**Subject:** RE: Glenelg Phase 3 - Dundalk North Subdivision

Hello Dustin,

We would like to commission traffic counts this week if possible ( so the counts are completed before school lets out for the summer).

Would you be able to confirm the study locations?

Thank you,

**Emma Howlett**, EIT | Engineering Intern
1 First Street, Suite 200 | Collingwood, ON L9Y 1A1
T: 705.446.3510


Crozier Connections:

**Read our latest news and announcements** here.

---

**From:** Emma Howlett
**Sent:** May 26, 2022 4:02 PM
**To:** dlyttle@tritoneng.on.ca
**Cc:** Kerianne Hagan <khagan@cfcrozier.ca>; Dina Al-Rubaye <dal-Rubaye@cfcrozier.ca>
**Subject:** FW: Glenelg Phase 3

Good Afternoon Dustin,

C.F. Crozier & Associates has been retained to prepare a Traffic Impact Study (TIS) to review the traffic impacts and potential mitigations required to support the Dundalk North Subdivision in the Village of Dundalk, Township of Southgate, County of Grey. The site is proposed to connect to Glenelg Phase 2 and the future Bradley Street extension.

The Terms of Reference are as follows:

Traffic Data/Study Intersections

Now that Covid-19 restrictions have been lifted, traffic counts will be collected at the following intersections:

- Glenelg Street and Ida Street
- Dundalk Street and Glenelg Street
- Ida Street and Main Street
- Dundalk Street and Main Street
- Main Street and Osprey Street ***[DCL] The eastbound traffic from Osprey Street is known to use Owen Sound Street. Therefore, Main St / Owen Sound St should also be counted.***
- ***[DCL] Bradley Street and Osprey Street***

Analysis Periods and Scenarios

Analysis of weekday a.m. and p.m. peak hours will be used to capture the peak hours associated with the residential development.***[DCL] OK***

IT has been assumed that the proposed development will be completed within 5 years. Accordingly, the horizon years of 2023 and 2028 will be analyzed, representing 5 and 10 years from the study date***[DCL] OK***

Background Growth

A growth rate of 1.5% per year will be applied to the boundary road network as consistent with previous studies undertaken in Dundalk. ***[DCL] OK***

Background Developments

There are several ongoing developments within the Village of Dundalk. Unoccupied units from Flato's developments of Dundalk North and East ("Edgewood Greens") as well as Glenelg Phase 1 and 2 will be considered as background developments.***[DCL] This should also consider White Rose Phase 3.***

Trip Generation

Trip generation will be established based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition.***[DCL] OK***

Trip Distribution

Trips will be distributed to the boundary road network based on a review of the Transportation Tomorrow Survey data from 2016 from the abutting Township of Melancthon, a review of existing travel patterns, and a review of previously assumed distributions. ***[DCL] We ask that two scenarios be considered; with and without the Industrial Road (Eco Parkway) extension to Hwy 10.***

***[DCL] In addition to the above comments we ask the impact on the existing streets be considered:***

***Impact on Existing Connecting Streets***

***Report to fully address the impact on connecting streets including Bradley Street. This includes capacity, standards, pedestrian safety, and neighbourhood impacts.***

We trust that the above is acceptable.
Should you have any questions or concerns, please feel free to contact us.

# APPENDIX B

## Traffic Data

Spectrum

Turning Movement Count
Location Name: DUNDALK ST & GLENELG ST
Date: Tue, Jun 07, 2022 Deployment Lead: Tasos Issaaakidis

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

## Turning Movement Count (2 . DUNDALK ST & GLENELG ST)

| Start Time | N Approach GLENELG ST | | | | | | E Approach GREY ST S | | | | | | S Approach DUNDALK ST | | | | | | W Approach GREY ST S | | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right N:W | Thru N:S | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Thru E:W | Left E:S | UTurn E:E | Peds E: | Approach Total | Right S:E | Thru S:N | Left S:W | UTurn S:S | Peds S: | Approach Total | Right W:S | Thru W:E | Left W:N | UTurn W:W | Peds W: | Approach Total | | |
| 06:00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 06:15:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| 06:30:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | |
| 06:45:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 |
| 07:00:00 | 0 | 3 | 0 | 0 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 21 |
| 07:15:00 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | 0 | 1 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 10 | 26 |
| 07:30:00 | 0 | 1 | 1 | 0 | 0 | 2 | 5 | 0 | 1 | 0 | 0 | 6 | 1 | 5 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 38 |
| 07:45:00 | 1 | 3 | 2 | 0 | 0 | 6 | 4 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 46 |
| 08:00:00 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 0 | 2 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 9 | 44 |
| 08:15:00 | 0 | 3 | 7 | 0 | 0 | 10 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 17 | 51 |
| 08:30:00 | 0 | 4 | 4 | 0 | 0 | 8 | 4 | 0 | 7 | 0 | 0 | 11 | 2 | 2 | 1 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 2 | 26 | 63 |
| 08:45:00 | 1 | 2 | 2 | 0 | 0 | 5 | 2 | 0 | 12 | 0 | 0 | 14 | 6 | 1 | 0 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 1 | 27 | 79 |
| 09:00:00 | 0 | 0 | 4 | 0 | 0 | 4 | 2 | 0 | 2 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 11 | 81 |
| 09:15:00 | 0 | 0 | 3 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 72 |
| 09:30:00 | 0 | 1 | 5 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 13 | 59 |
| 09:45:00 | 0 | 4 | 6 | 0 | 0 | 10 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 46 |
| ***BREAK*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15:00:00 | 0 | 1 | 3 | 0 | 0 | 4 | 3 | 0 | 6 | 0 | 0 | 9 | 4 | 5 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | |
| 15:15:00 | 0 | 2 | 6 | 0 | 3 | 8 | 5 | 0 | 3 | 0 | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | |
| 15:30:00 | 0 | 2 | 5 | 0 | 0 | 7 | 6 | 1 | 0 | 0 | 0 | 7 | 3 | 1 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 20 | |
| 15:45:00 | 0 | 4 | 5 | 0 | 0 | 9 | 5 | 0 | 1 | 0 | 0 | 6 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 78 |
| 16:00:00 | 0 | 2 | 2 | 0 | 0 | 4 | 5 | 1 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 12 | 68 |
| 16:15:00 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 56 |
| 16:30:00 | 0 | 1 | 2 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 3 | 1 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 15 | 51 |
| 16:45:00 | 0 | 1 | 1 | 0 | 0 | 2 | 4 | 0 | 0 | 1 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 43 |
| 17:00:00 | 0 | 2 | 7 | 0 | 0 | 9 | 6 | 0 | 2 | 0 | 0 | 8 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 51 |
| 17:15:00 | 0 | 0 | 7 | 0 | 0 | 7 | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 58 |
| 17:30:00 | 0 | 1 | 2 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 50 |
| 17:45:00 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 43 |
| 18:00:00 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 28 |
| 18:15:00 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 20 |
| 18:30:00 | 0 | 1 | 3 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 9 | 22 |
| 18:45:00 | 0 | 1 | 2 | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 27 |
| **Grand Total** | 2 | 42 | 84 | 0 | 4 | 128 | 100 | 5 | 42 | 1 | 2 | 148 | 31 | 41 | 8 | 1 | 3 | 81 | 11 | 1 | 3 | 0 | 2 | 15 | **372** | - |
| **Approach%** | 1.6% | 32.8% | 65.6% | 0% | | - | 67.6% | 3.4% | 28.4% | 0.7% | | - | 38.3% | 50.6% | 9.9% | 1.2% | | - | 73.3% | 6.7% | 20% | 0% | | - | - | - |
| **Totals %** | 0.5% | 11.3% | 22.6% | 0% | | 34.4% | 26.9% | 1.3% | 11.3% | 0.3% | | 39.8% | 8.3% | 11% | 2.2% | 0.3% | | 21.8% | 3% | 0.3% | 0.8% | 0% | | 4% | - | - |
| **Heavy** | 2 | 2 | 5 | 0 | | - | 3 | 0 | 0 | 0 | | - | 0 | 3 | 3 | 0 | | - | 0 | 0 | 3 | 0 | | - | - | - |
| **Heavy %** | 100% | 4.8% | 6% | 0% | | - | 3% | 0% | 0% | 0% | | - | 0% | 7.3% | 37.5% | 0% | | - | 0% | 0% | 100% | 0% | | - | - | - |
| **Bicycles** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - |
| **Bicycle %** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:15 AM - 09:15 AM Weather: Overcast Clouds (16.73 °C)**

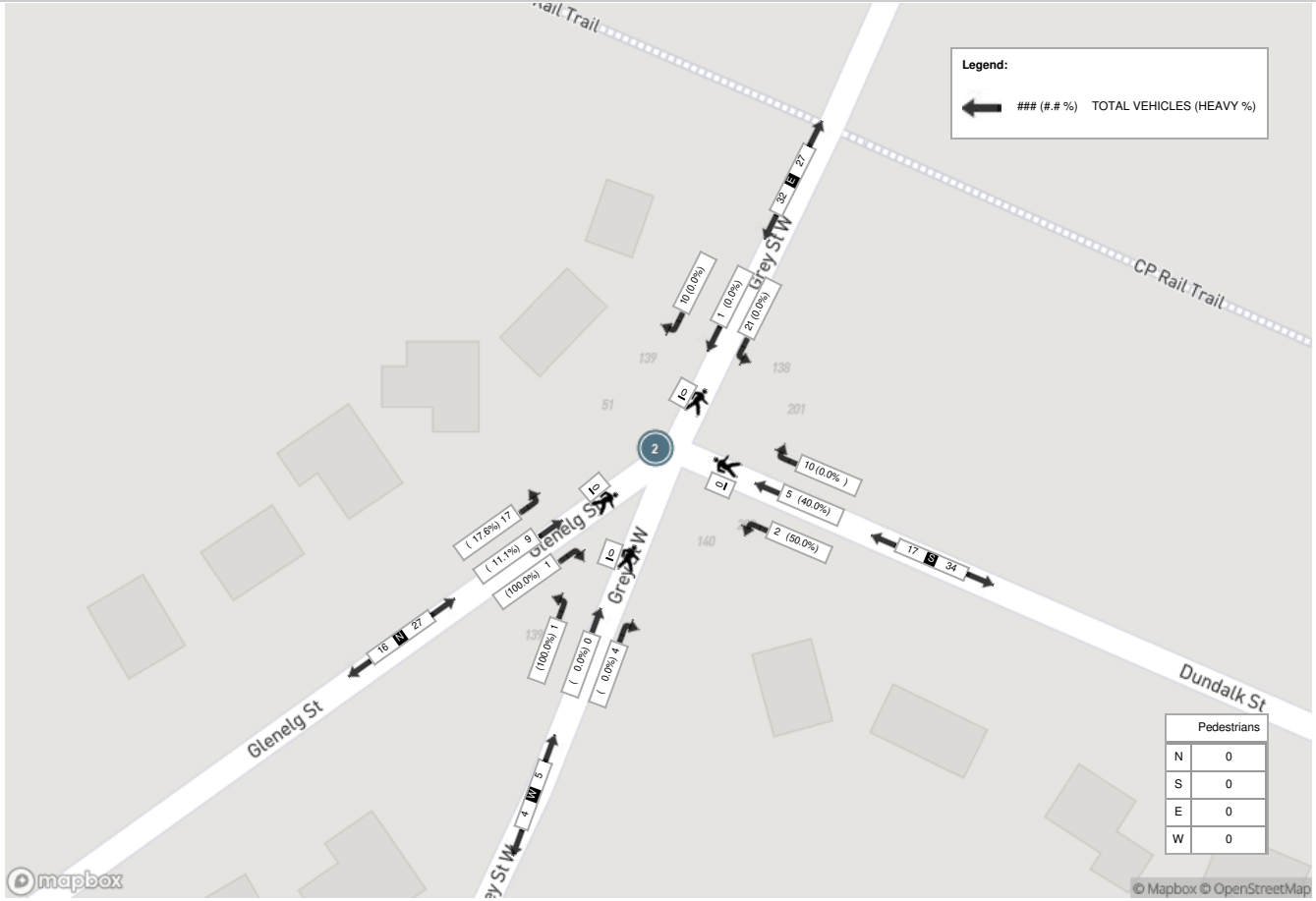
| Start Time | N Approach GLENELG ST | | | | | | E Approach GREY ST S | | | | | | S Approach DUNDALK ST | | | | | | W Approach GREY ST S | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 08:15:00 | 0 | 3 | 7 | 0 | 0 | 10 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 17 |
| 08:30:00 | 0 | 4 | 4 | 0 | 0 | 8 | 4 | 0 | 7 | 0 | 0 | 11 | 2 | 2 | 1 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 2 | 26 |
| 08:45:00 | 1 | 2 | 2 | 0 | 0 | 5 | 2 | 0 | 12 | 0 | 0 | 14 | 6 | 1 | 0 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 1 | 27 |
| 09:00:00 | 0 | 0 | 4 | 0 | 0 | 4 | 2 | 0 | 2 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 11 |
| **Grand Total** | 1 | 9 | 17 | 0 | 0 | 27 | 10 | 1 | 21 | 0 | 0 | 32 | 10 | 5 | 2 | 0 | 0 | 17 | 4 | 0 | 1 | 0 | 0 | 5 | **81** |
| **Approach%** | 3.7% | 33.3% | 63% | 0% | | - | 31.3% | 3.1% | 65.6% | 0% | | - | 58.8% | 29.4% | 11.8% | 0% | | - | 80% | 0% | 20% | 0% | | - | **-** |
| **Totals %** | 1.2% | 11.1% | 21% | 0% | | 33.3% | 12.3% | 1.2% | 25.9% | 0% | | 39.5% | 12.3% | 6.2% | 2.5% | 0% | | 21% | 4.9% | 0% | 1.2% | 0% | | 6.2% | **-** |
| **PHF** | 0.25 | 0.56 | 0.61 | 0 | | 0.68 | 0.63 | 0.25 | 0.44 | 0 | | 0.57 | 0.42 | 0.63 | 0.5 | 0 | | 0.61 | 0.5 | 0 | 0.25 | 0 | | 0.63 | **-** |
| **Heavy** | 1 | 1 | 3 | 0 | | 5 | 0 | 0 | 0 | 0 | | 0 | 0 | 2 | 1 | 0 | | 3 | 0 | 0 | 1 | 0 | | 1 | **-** |
| **Heavy %** | 100% | 11.1% | 17.6% | 0% | | 18.5% | 0% | 0% | 0% | 0% | | 0% | 0% | 40% | 50% | 0% | | 17.6% | 0% | 0% | 100% | 0% | | 20% | **-** |
| **Lights** | 0 | 8 | 14 | 0 | | 22 | 10 | 1 | 21 | 0 | | 32 | 10 | 3 | 1 | 0 | | 14 | 4 | 0 | 0 | 0 | | 4 | **-** |
| **Lights %** | 0% | 88.9% | 82.4% | 0% | | 81.5% | 100% | 100% | 100% | 0% | | 100% | 100% | 60% | 50% | 0% | | 82.4% | 100% | 0% | 0% | 0% | | 80% | **-** |
| **Single-Unit Trucks** | 1 | 1 | 0 | 0 | | 2 | 0 | 0 | 0 | 0 | | 0 | 0 | 2 | 1 | 0 | | 3 | 0 | 0 | 1 | 0 | | 1 | **-** |
| **Single-Unit Trucks %** | 100% | 11.1% | 0% | 0% | | 7.4% | 0% | 0% | 0% | 0% | | 0% | 0% | 40% | 50% | 0% | | 17.6% | 0% | 0% | 100% | 0% | | 20% | **-** |
| **Buses** | 0 | 0 | 3 | 0 | | 3 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Buses %** | 0% | 0% | 17.6% | 0% | | 11.1% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

**Peak Hour: 03:00 PM - 04:00 PM Weather: Overcast Clouds (12.76 °C)**

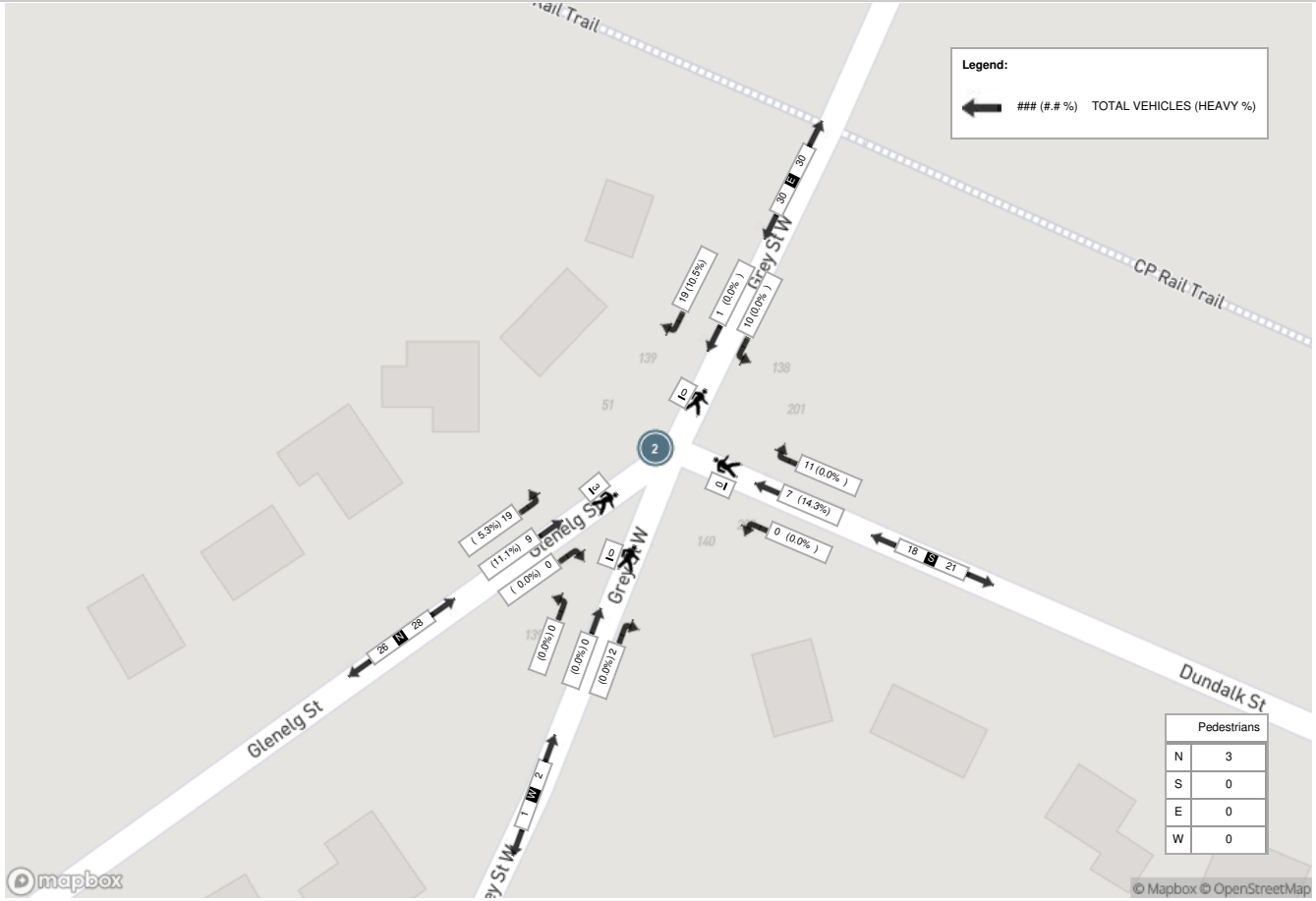
| Start Time | N Approach GLENELG ST | | | | | | E Approach GREY ST S | | | | | | S Approach DUNDALK ST | | | | | | W Approach GREY ST S | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 15:00:00 | 0 | 1 | 3 | 0 | 0 | 4 | 3 | 0 | 6 | 0 | 0 | 9 | 4 | 5 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 15:15:00 | 0 | 2 | 6 | 0 | 3 | 8 | 5 | 0 | 3 | 0 | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 15:30:00 | 0 | 2 | 5 | 0 | 0 | 7 | 6 | 1 | 0 | 0 | 0 | 7 | 3 | 1 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 2 | 20 |
| 15:45:00 | 0 | 4 | 5 | 0 | 0 | 9 | 5 | 0 | 1 | 0 | 0 | 6 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| **Grand Total** | 0 | 9 | 19 | 0 | 3 | 28 | 19 | 1 | 10 | 0 | 0 | 30 | 11 | 7 | 0 | 0 | 0 | 18 | 2 | 0 | 0 | 0 | 0 | 2 | **78** |
| **Approach%** | 0% | 32.1% | 67.9% | 0% | | - | 63.3% | 3.3% | 33.3% | 0% | | - | 61.1% | 38.9% | 0% | 0% | | - | 100% | 0% | 0% | 0% | | - | **-** |
| **Totals %** | 0% | 11.5% | 24.4% | 0% | | 35.9% | 24.4% | 1.3% | 12.8% | 0% | | 38.5% | 14.1% | 9% | 0% | 0% | | 23.1% | 2.6% | 0% | 0% | 0% | | 2.6% | **-** |
| **PHF** | 0 | 0.56 | 0.79 | 0 | | 0.78 | 0.79 | 0.25 | 0.42 | 0 | | 0.83 | 0.69 | 0.35 | 0 | 0 | | 0.5 | 0.25 | 0 | 0 | 0 | | 0.25 | **-** |
| **Heavy** | 0 | 1 | 1 | 0 | | 2 | 2 | 0 | 0 | 0 | | 2 | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Heavy %** | 0% | 11.1% | 5.3% | 0% | | 7.1% | 10.5% | 0% | 0% | 0% | | 6.7% | 0% | 14.3% | 0% | 0% | | 5.6% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Lights** | 0 | 8 | 18 | 0 | | 26 | 17 | 1 | 10 | 0 | | 28 | 11 | 6 | 0 | 0 | | 17 | 2 | 0 | 0 | 0 | | 2 | **-** |
| **Lights %** | 0% | 88.9% | 94.7% | 0% | | 92.9% | 89.5% | 100% | 100% | 0% | | 93.3% | 100% | 85.7% | 0% | 0% | | 94.4% | 100% | 0% | 0% | 0% | | 100% | **-** |
| **Single-Unit Trucks** | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Single-Unit Trucks %** | 0% | 11.1% | 0% | 0% | | 3.6% | 0% | 0% | 0% | 0% | | 0% | 0% | 14.3% | 0% | 0% | | 5.6% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Buses** | 0 | 0 | 0 | 0 | | 0 | 2 | 0 | 0 | 0 | | 2 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Buses %** | 0% | 0% | 0% | 0% | | 0% | 10.5% | 0% | 0% | 0% | | 6.7% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Articulated Trucks** | 0 | 0 | 1 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Articulated Trucks %** | 0% | 0% | 5.3% | 0% | | 3.6% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | - | 3 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | - | 100% | | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:15 AM - 09:15 AM** **Weather: Overcast Clouds (16.73 °C)**



**Peak Hour: 03:00 PM - 04:00 PM Weather: Overcast Clouds (12.76 °C)**



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CANADA

## Turning Movement Count (4 . DUNDALK ST & MAIN ST)

| Start Time | N Approach DUNDALK ST | | | | | E Approach MAIN ST (GREY RD 9) | | | | | W Approach MAIN ST (GREY RD 9) | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right N:W | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Thru E:W | UTurn E:E | Peds E: | Approach Total | Thru W:E | Left W:N | UTurn W:W | Peds W: | Approach Total | | |
| 06:00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 18 | 25 | 0 | 0 | 0 | 25 | 43 | |
| 06:15:00 | 1 | 1 | 0 | 0 | 2 | 4 | 26 | 0 | 0 | 30 | 16 | 0 | 0 | 0 | 16 | 48 | |
| 06:30:00 | 0 | 1 | 0 | 0 | 1 | 1 | 25 | 0 | 0 | 26 | 28 | 0 | 0 | 0 | 28 | 55 | |
| 06:45:00 | 1 | 2 | 0 | 0 | 3 | 5 | 18 | 0 | 0 | 23 | 29 | 0 | 0 | 0 | 29 | 55 | 201 |
| 07:00:00 | 3 | 3 | 0 | 1 | 6 | 2 | 21 | 0 | 0 | 23 | 24 | 1 | 0 | 0 | 25 | 54 | 212 |
| 07:15:00 | 1 | 0 | 0 | 0 | 1 | 1 | 30 | 0 | 0 | 31 | 40 | 1 | 0 | 0 | 41 | 73 | 237 |
| 07:30:00 | 3 | 2 | 0 | 0 | 5 | 6 | 24 | 0 | 0 | 30 | 34 | 2 | 0 | 0 | 36 | 71 | 253 |
| 07:45:00 | 2 | 3 | 0 | 1 | 5 | 0 | 29 | 0 | 0 | 29 | 36 | 3 | 0 | 0 | 39 | 73 | 271 |
| 08:00:00 | 4 | 1 | 0 | 0 | 5 | 3 | 24 | 0 | 2 | 27 | 34 | 3 | 0 | 0 | 37 | 69 | 286 |
| 08:15:00 | 4 | 3 | 0 | 4 | 7 | 8 | 33 | 0 | 0 | 41 | 38 | 5 | 0 | 1 | 43 | 91 | 304 |
| 08:30:00 | 6 | 5 | 0 | 5 | 11 | 4 | 54 | 0 | 0 | 58 | 52 | 4 | 0 | 0 | 56 | 125 | 358 |
| 08:45:00 | 17 | 1 | 0 | 1 | 18 | 6 | 44 | 0 | 1 | 50 | 89 | 9 | 0 | 0 | 98 | 166 | 451 |
| 09:00:00 | 6 | 2 | 0 | 0 | 8 | 2 | 35 | 0 | 0 | 37 | 49 | 2 | 0 | 0 | 51 | 96 | 478 |
| 09:15:00 | 1 | 2 | 0 | 1 | 3 | 1 | 21 | 0 | 0 | 22 | 33 | 2 | 0 | 0 | 35 | 60 | 447 |
| 09:30:00 | 3 | 2 | 0 | 1 | 5 | 6 | 25 | 0 | 1 | 31 | 38 | 0 | 0 | 0 | 38 | 74 | 396 |
| 09:45:00 | 2 | 4 | 0 | 0 | 6 | 4 | 30 | 0 | 1 | 34 | 38 | 5 | 0 | 0 | 43 | 83 | 313 |
| ***BREAK*** | | | | | | | | | | | | | | | | | |
| 15:00:00 | 9 | 5 | 0 | 0 | 14 | 2 | 45 | 0 | 0 | 47 | 47 | 8 | 0 | 0 | 55 | 116 | |
| 15:15:00 | 3 | 2 | 0 | 24 | 5 | 2 | 39 | 1 | 0 | 42 | 67 | 8 | 0 | 0 | 75 | 122 | |
| 15:30:00 | 0 | 8 | 0 | 6 | 8 | 3 | 30 | 0 | 0 | 33 | 40 | 2 | 0 | 0 | 42 | 83 | |
| 15:45:00 | 5 | 6 | 0 | 1 | 11 | 1 | 49 | 0 | 0 | 50 | 40 | 4 | 0 | 0 | 44 | 105 | 426 |
| 16:00:00 | 11 | 3 | 0 | 1 | 14 | 1 | 41 | 0 | 2 | 42 | 57 | 2 | 0 | 0 | 59 | 115 | 425 |
| 16:15:00 | 4 | 1 | 0 | 4 | 5 | 2 | 57 | 0 | 0 | 59 | 51 | 3 | 0 | 2 | 54 | 118 | 421 |
| 16:30:00 | 6 | 6 | 0 | 0 | 12 | 4 | 49 | 0 | 0 | 53 | 44 | 3 | 0 | 0 | 47 | 112 | 450 |
| 16:45:00 | 4 | 4 | 0 | 1 | 8 | 5 | 40 | 0 | 0 | 45 | 46 | 1 | 0 | 0 | 47 | 100 | 445 |
| 17:00:00 | 7 | 5 | 0 | 2 | 12 | 3 | 44 | 0 | 0 | 47 | 44 | 0 | 0 | 0 | 44 | 103 | 433 |
| 17:15:00 | 9 | 1 | 0 | 1 | 10 | 5 | 40 | 0 | 0 | 45 | 53 | 1 | 0 | 1 | 54 | 109 | 424 |
| 17:30:00 | 3 | 2 | 0 | 3 | 5 | 1 | 37 | 0 | 0 | 38 | 46 | 2 | 0 | 0 | 48 | 91 | 403 |
| 17:45:00 | 0 | 5 | 0 | 0 | 5 | 0 | 42 | 0 | 0 | 42 | 36 | 3 | 0 | 0 | 39 | 86 | 389 |
| 18:00:00 | 4 | 0 | 0 | 1 | 4 | 3 | 25 | 0 | 0 | 28 | 30 | 0 | 0 | 0 | 30 | 62 | 348 |
| 18:15:00 | 0 | 2 | 0 | 3 | 2 | 4 | 13 | 0 | 0 | 17 | 33 | 0 | 0 | 0 | 33 | 52 | 291 |
| 18:30:00 | 1 | 4 | 0 | 1 | 5 | 5 | 27 | 0 | 0 | 32 | 28 | 5 | 0 | 0 | 33 | 70 | 270 |
| 18:45:00 | 1 | 5 | 0 | 1 | 6 | 5 | 22 | 0 | 0 | 27 | 32 | 5 | 0 | 1 | 37 | 70 | 254 |

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| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Grand Total** | 121 | 91 | 0 | 63 | 212 | 99 | 1057 | 1 | 7 | 1157 | 1297 | 84 | 0 | 5 | 1381 | **2750** | - |
| **Approach%** | 57.1% | 42.9% | 0% | | - | 8.6% | 91.4% | 0.1% | | - | 93.9% | 6.1% | 0% | | - | **-** | - |
| **Totals %** | 4.4% | 3.3% | 0% | | 7.7% | 3.6% | 38.4% | 0% | | 42.1% | 47.2% | 3.1% | 0% | | 50.2% | **-** | - |
| **Heavy** | 5 | 5 | 0 | | - | 3 | 114 | 0 | | - | 125 | 5 | 0 | | - | **-** | - |
| **Heavy %** | 4.1% | 5.5% | 0% | | - | 3% | 10.8% | 0% | | - | 9.6% | 6% | 0% | | - | **-** | - |
| **Bicycles** | - | - | - | | - | - | - | - | | - | - | - | - | | - | **-** | - |
| **Bicycle %** | - | - | - | | - | - | - | - | | - | - | - | - | | - | **-** | - |

Crozier & Associates
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COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:15 AM - 09:15 AM Weather: Overcast Clouds (16.73 °C)**

| Start Time | N Approach DUNDALK ST | | | | | E Approach MAIN ST (GREY RD 9) | | | | | W Approach MAIN ST (GREY RD 9) | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Left | UTurn | Peds | Approach Total | Right | Thru | UTurn | Peds | Approach Total | Thru | Left | UTurn | Peds | Approach Total | |
| 08:15:00 | 4 | 3 | 0 | 4 | 7 | 8 | 33 | 0 | 0 | 41 | 38 | 5 | 0 | 1 | 43 | 91 |
| 08:30:00 | 6 | 5 | 0 | 5 | 11 | 4 | 54 | 0 | 0 | 58 | 52 | 4 | 0 | 0 | 56 | 125 |
| 08:45:00 | 17 | 1 | 0 | 1 | 18 | 6 | 44 | 0 | 1 | 50 | 89 | 9 | 0 | 0 | 98 | 166 |
| 09:00:00 | 6 | 2 | 0 | 0 | 8 | 2 | 35 | 0 | 0 | 37 | 49 | 2 | 0 | 0 | 51 | 96 |
| **Grand Total** | 33 | 11 | 0 | 10 | 44 | 20 | 166 | 0 | 1 | 186 | 228 | 20 | 0 | 1 | 248 | **478** |
| **Approach%** | 75% | 25% | 0% | | - | 10.8% | 89.2% | 0% | | - | 91.9% | 8.1% | 0% | | - | **-** |
| **Totals %** | 6.9% | 2.3% | 0% | | 9.2% | 4.2% | 34.7% | 0% | | 38.9% | 47.7% | 4.2% | 0% | | 51.9% | **-** |
| **PHF** | 0.49 | 0.55 | 0 | | 0.61 | 0.63 | 0.77 | 0 | | 0.8 | 0.64 | 0.56 | 0 | | 0.63 | **-** |
| **Heavy** | 1 | 2 | 0 | | 3 | 3 | 24 | 0 | | 27 | 26 | 2 | 0 | | 28 | **-** |
| **Heavy %** | 3% | 18.2% | 0% | | 6.8% | 15% | 14.5% | 0% | | 14.5% | 11.4% | 10% | 0% | | 11.3% | **-** |
| **Lights** | 32 | 9 | 0 | | 41 | 17 | 142 | 0 | | 159 | 202 | 18 | 0 | | 220 | **-** |
| **Lights %** | 97% | 81.8% | 0% | | 93.2% | 85% | 85.5% | 0% | | 85.5% | 88.6% | 90% | 0% | | 88.7% | **-** |
| **Single-Unit Trucks** | 0 | 1 | 0 | | 1 | 3 | 8 | 0 | | 11 | 19 | 2 | 0 | | 21 | **-** |
| **Single-Unit Trucks %** | 0% | 9.1% | 0% | | 2.3% | 15% | 4.8% | 0% | | 5.9% | 8.3% | 10% | 0% | | 8.5% | **-** |
| **Buses** | 1 | 0 | 0 | | 1 | 0 | 7 | 0 | | 7 | 4 | 0 | 0 | | 4 | **-** |
| **Buses %** | 3% | 0% | 0% | | 2.3% | 0% | 4.2% | 0% | | 3.8% | 1.8% | 0% | 0% | | 1.6% | **-** |
| **Articulated Trucks** | 0 | 1 | 0 | | 1 | 0 | 9 | 0 | | 9 | 3 | 0 | 0 | | 3 | **-** |
| **Articulated Trucks %** | 0% | 9.1% | 0% | | 2.3% | 0% | 5.4% | 0% | | 4.8% | 1.3% | 0% | 0% | | 1.2% | **-** |
| **Bicycles on Road** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Bicycles on Road %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | 8 | - | - | - | - | 1 | - | - | - | - | 1 | - | **-** |
| **Pedestrians%** | - | - | - | 66.7% | | - | - | - | 8.3% | | - | - | - | 8.3% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | 2 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | 16.7% | | - | - | - | 0% | | - | - | - | 0% | | **-** |

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COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:45 PM - 04:45 PM Weather: Overcast Clouds (12.76 °C)**

| Start Time | N Approach DUNDALK ST | | | | | E Approach MAIN ST (GREY RD 9) | | | | | W Approach MAIN ST (GREY RD 9) | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Left | UTurn | Peds | Approach Total | Right | Thru | UTurn | Peds | Approach Total | Thru | Left | UTurn | Peds | Approach Total | |
| 15:45:00 | 5 | 6 | 0 | 1 | 11 | 1 | 49 | 0 | 0 | 50 | 40 | 4 | 0 | 0 | 44 | 105 |
| 16:00:00 | 11 | 3 | 0 | 1 | 14 | 1 | 41 | 0 | 2 | 42 | 57 | 2 | 0 | 0 | 59 | 115 |
| 16:15:00 | 4 | 1 | 0 | 4 | 5 | 2 | 57 | 0 | 0 | 59 | 51 | 3 | 0 | 2 | 54 | 118 |
| 16:30:00 | 6 | 6 | 0 | 0 | 12 | 4 | 49 | 0 | 0 | 53 | 44 | 3 | 0 | 0 | 47 | 112 |
| **Grand Total** | 26 | 16 | 0 | 6 | 42 | 8 | 196 | 0 | 2 | 204 | 192 | 12 | 0 | 2 | 204 | **450** |
| **Approach%** | 61.9% | 38.1% | 0% | | - | 3.9% | 96.1% | 0% | | - | 94.1% | 5.9% | 0% | | - | **-** |
| **Totals %** | 5.8% | 3.6% | 0% | | 9.3% | 1.8% | 43.6% | 0% | | 45.3% | 42.7% | 2.7% | 0% | | 45.3% | **-** |
| **PHF** | 0.59 | 0.67 | 0 | | 0.75 | 0.5 | 0.86 | 0 | | 0.86 | 0.84 | 0.75 | 0 | | 0.86 | **-** |
| **Heavy** | 0 | 1 | 0 | | 1 | 0 | 17 | 0 | | 17 | 11 | 0 | 0 | | 11 | **-** |
| **Heavy %** | 0% | 6.3% | 0% | | 2.4% | 0% | 8.7% | 0% | | 8.3% | 5.7% | 0% | 0% | | 5.4% | **-** |
| **Lights** | 26 | 15 | 0 | | 41 | 8 | 179 | 0 | | 187 | 181 | 12 | 0 | | 193 | **-** |
| **Lights %** | 100% | 93.8% | 0% | | 97.6% | 100% | 91.3% | 0% | | 91.7% | 94.3% | 100% | 0% | | 94.6% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | | 0 | 0 | 9 | 0 | | 9 | 4 | 0 | 0 | | 4 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | | 0% | 0% | 4.6% | 0% | | 4.4% | 2.1% | 0% | 0% | | 2% | **-** |
| **Buses** | 0 | 0 | 0 | | 0 | 0 | 1 | 0 | | 1 | 3 | 0 | 0 | | 3 | **-** |
| **Buses %** | 0% | 0% | 0% | | 0% | 0% | 0.5% | 0% | | 0.5% | 1.6% | 0% | 0% | | 1.5% | **-** |
| **Articulated Trucks** | 0 | 1 | 0 | | 1 | 0 | 7 | 0 | | 7 | 4 | 0 | 0 | | 4 | **-** |
| **Articulated Trucks %** | 0% | 6.3% | 0% | | 2.4% | 0% | 3.6% | 0% | | 3.4% | 2.1% | 0% | 0% | | 2% | **-** |
| **Bicycles on Road** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Bicycles on Road %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | 2 | - | - | - | - | 2 | - | - | - | - | 2 | - | **-** |
| **Pedestrians%** | - | - | - | 20% | | - | - | - | 20% | | - | - | - | 20% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | 4 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | 40% | | - | - | - | 0% | | - | - | - | 0% | | **-** |

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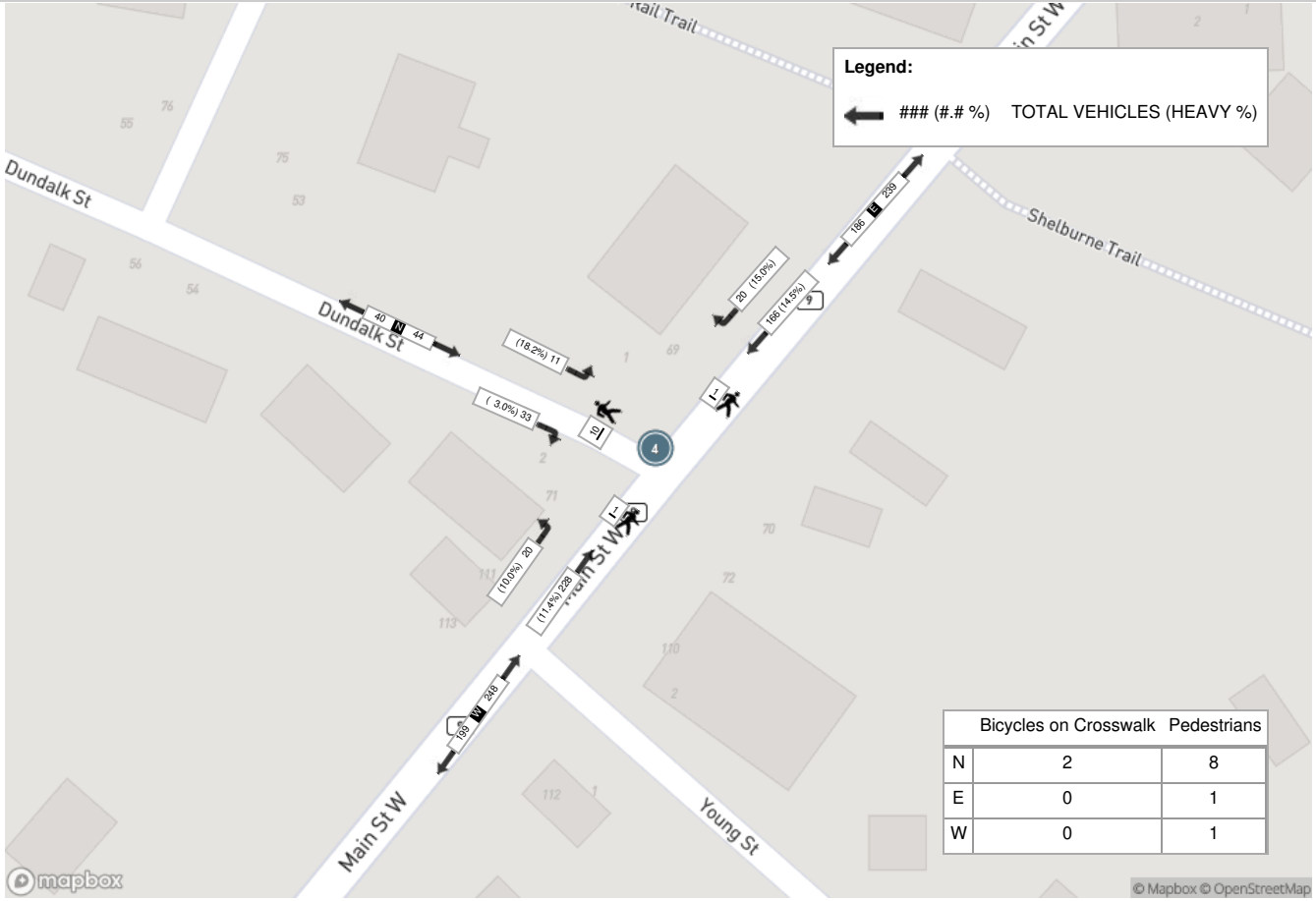
CANADA

**Peak Hour: 08:15 AM - 09:15 AM Weather: Overcast Clouds (16.73 °C)**




| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 2 | 8 |
| E | 0 | 1 |
| W | 0 | 1 |

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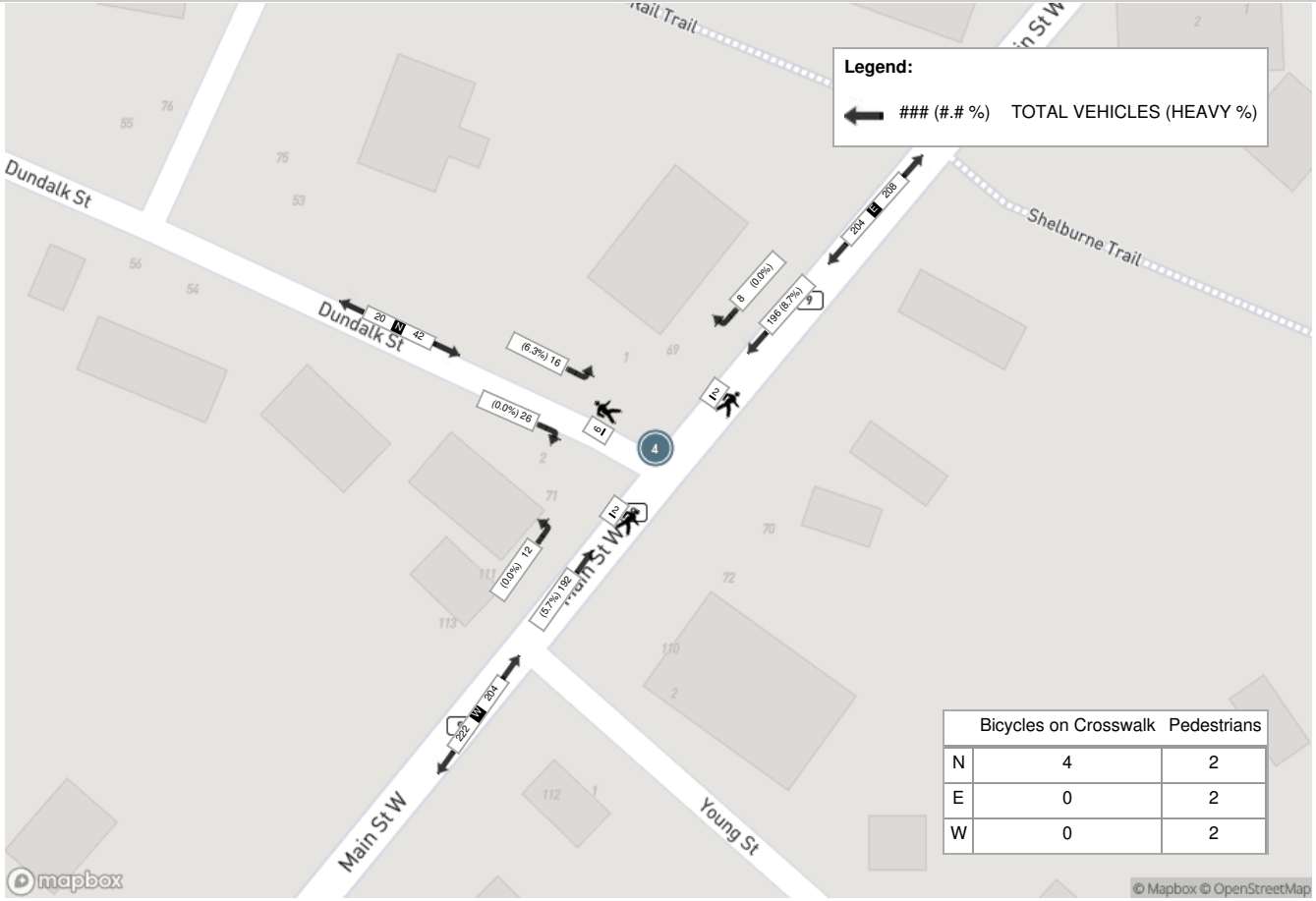
CANADA

**Peak Hour: 03:45 PM - 04:45 PM Weather: Overcast Clouds (12.76 °C)**




| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 4 | 2 |
| E | 0 | 2 |
| W | 0 | 2 |

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## Turning Movement Count (1 . GLENELG ST & IDA ST)

| Start Time | N Approach IDA ST | | | | | E Approach GLENELG ST | | | | | S Approach IDA ST | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru N:S | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Left E:S | UTurn E:E | Peds E: | Approach Total | Right S:E | Thru S:N | UTurn S:S | Peds S: | Approach Total | | |
| 06:00:00 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | |
| 06:15:00 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 06:30:00 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | |
| 06:45:00 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 7 | 14 |
| 07:00:00 | 5 | 1 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 1 | 2 | 4 | 0 | 0 | 6 | 13 | 24 |
| 07:15:00 | 3 | 1 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 3 | 9 | 31 |
| 07:30:00 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 6 | 35 |
| 07:45:00 | 5 | 1 | 0 | 0 | 6 | 2 | 2 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | 4 | 14 | 42 |
| 08:00:00 | 3 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 6 | 35 |
| 08:15:00 | 5 | 5 | 0 | 0 | 10 | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 3 | 15 | 41 |
| 08:30:00 | 3 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 | 4 | 4 | 5 | 0 | 0 | 9 | 17 | 52 |
| 08:45:00 | 4 | 2 | 0 | 0 | 6 | 2 | 1 | 0 | 0 | 3 | 1 | 2 | 0 | 0 | 3 | 12 | 50 |
| 09:00:00 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 3 | 5 | 49 |
| 09:15:00 | 2 | 2 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | 8 | 42 |
| 09:30:00 | 3 | 2 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 7 | 32 |
| 09:45:00 | 5 | 2 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 4 | 12 | 32 |
| ***BREAK*** | | | | | | | | | | | | | | | | | |
| 15:00:00 | 4 | 1 | 0 | 0 | 5 | 4 | 1 | 0 | 0 | 5 | 1 | 6 | 0 | 0 | 7 | 17 | |
| 15:15:00 | 3 | 2 | 0 | 0 | 5 | 2 | 4 | 0 | 0 | 6 | 6 | 1 | 0 | 0 | 7 | 18 | |
| 15:30:00 | 1 | 2 | 0 | 0 | 3 | 5 | 4 | 0 | 0 | 9 | 1 | 8 | 0 | 0 | 9 | 21 | |
| 15:45:00 | 3 | 2 | 0 | 0 | 5 | 3 | 5 | 0 | 0 | 8 | 0 | 2 | 0 | 0 | 2 | 15 | 71 |
| 16:00:00 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 4 | 1 | 3 | 0 | 0 | 4 | 9 | 63 |
| 16:15:00 | 4 | 0 | 0 | 1 | 4 | 3 | 3 | 0 | 0 | 6 | 0 | 5 | 0 | 0 | 5 | 15 | 60 |
| 16:30:00 | 3 | 0 | 0 | 0 | 3 | 4 | 4 | 0 | 0 | 8 | 3 | 6 | 0 | 0 | 9 | 20 | 59 |
| 16:45:00 | 3 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 8 | 52 |
| 17:00:00 | 3 | 4 | 0 | 0 | 7 | 3 | 5 | 0 | 0 | 8 | 2 | 6 | 0 | 0 | 8 | 23 | 66 |
| 17:15:00 | 6 | 4 | 0 | 0 | 10 | 2 | 1 | 0 | 0 | 3 | 4 | 4 | 0 | 0 | 8 | 21 | 72 |
| 17:30:00 | 4 | 1 | 0 | 0 | 5 | 4 | 2 | 0 | 0 | 6 | 1 | 10 | 0 | 0 | 11 | 22 | 74 |
| 17:45:00 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 5 | 71 |
| 18:00:00 | 3 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 1 | 5 | 0 | 0 | 6 | 11 | 59 |
| 18:15:00 | 2 | 2 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 10 | 48 |
| 18:30:00 | 2 | 1 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 4 | 9 | 35 |
| 18:45:00 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 0 | 8 | 11 | 41 |

Crozier & Associates
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COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Grand Total** | 91 | 38 | 0 | 1 | 129 | 54 | 47 | 0 | 0 | 101 | 44 | 99 | 0 | 0 | 143 | **373** | - |
| **Approach%** | 70.5% | 29.5% | 0% | | - | 53.5% | 46.5% | 0% | | - | 30.8% | 69.2% | 0% | | - | **-** | - |
| **Totals %** | 24.4% | 10.2% | 0% | | 34.6% | 14.5% | 12.6% | 0% | | 27.1% | 11.8% | 26.5% | 0% | | 38.3% | **-** | - |
| **Heavy** | 7 | 2 | 0 | | - | 4 | 3 | 0 | | - | 5 | 12 | 0 | | - | **-** | - |
| **Heavy %** | 7.7% | 5.3% | 0% | | - | 7.4% | 6.4% | 0% | | - | 11.4% | 12.1% | 0% | | - | **-** | - |
| **Bicycles** | - | - | - | | - | - | - | - | | - | - | - | - | | - | **-** | - |
| **Bicycle %** | - | - | - | | - | - | - | - | | - | - | - | - | | - | **-** | - |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 07:45 AM - 08:45 AM Weather: Overcast Clouds (16.73 °C)**

| Start Time | N Approach IDA ST | | | | | E Approach GLENELG ST | | | | | S Approach IDA ST | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Left | UTurn | Peds | Approach Total | Right | Left | UTurn | Peds | Approach Total | Right | Thru | UTurn | Peds | Approach Total | |
| 07:45:00 | 5 | 1 | 0 | 0 | 6 | 2 | 2 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | 4 | 14 |
| 08:00:00 | 3 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 6 |
| 08:15:00 | 5 | 5 | 0 | 0 | 10 | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 3 | 15 |
| 08:30:00 | 3 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 | 4 | 4 | 5 | 0 | 0 | 9 | 17 |
| **Grand Total** | 16 | 7 | 0 | 0 | 23 | 6 | 5 | 0 | 0 | 11 | 9 | 9 | 0 | 0 | 18 | **52** |
| **Approach%** | 69.6% | 30.4% | 0% | | - | 54.5% | 45.5% | 0% | | - | 50% | 50% | 0% | | - | **-** |
| **Totals %** | 30.8% | 13.5% | 0% | | 44.2% | 11.5% | 9.6% | 0% | | 21.2% | 17.3% | 17.3% | 0% | | 34.6% | **-** |
| **PHF** | 0.8 | 0.35 | 0 | | 0.58 | 0.5 | 0.63 | 0 | | 0.69 | 0.56 | 0.45 | 0 | | 0.5 | **-** |
| **Heavy** | 2 | 1 | 0 | | 3 | 2 | 0 | 0 | | 2 | 3 | 0 | 0 | | 3 | **-** |
| **Heavy %** | 12.5% | 14.3% | 0% | | 13% | 33.3% | 0% | 0% | | 18.2% | 33.3% | 0% | 0% | | 16.7% | **-** |
| **Lights** | 14 | 6 | 0 | | 20 | 4 | 5 | 0 | | 9 | 6 | 9 | 0 | | 15 | **-** |
| **Lights %** | 87.5% | 85.7% | 0% | | 87% | 66.7% | 100% | 0% | | 81.8% | 66.7% | 100% | 0% | | 83.3% | **-** |
| **Single-Unit Trucks** | 1 | 0 | 0 | | 1 | 2 | 0 | 0 | | 2 | 1 | 0 | 0 | | 1 | **-** |
| **Single-Unit Trucks %** | 6.3% | 0% | 0% | | 4.3% | 33.3% | 0% | 0% | | 18.2% | 11.1% | 0% | 0% | | 5.6% | **-** |
| **Buses** | 1 | 1 | 0 | | 2 | 0 | 0 | 0 | | 0 | 2 | 0 | 0 | | 2 | **-** |
| **Buses %** | 6.3% | 14.3% | 0% | | 8.7% | 0% | 0% | 0% | | 0% | 22.2% | 0% | 0% | | 11.1% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Bicycles on Road** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Bicycles on Road %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | 0% | | - | - | - | 0% | | - | - | - | 0% | | **-** |

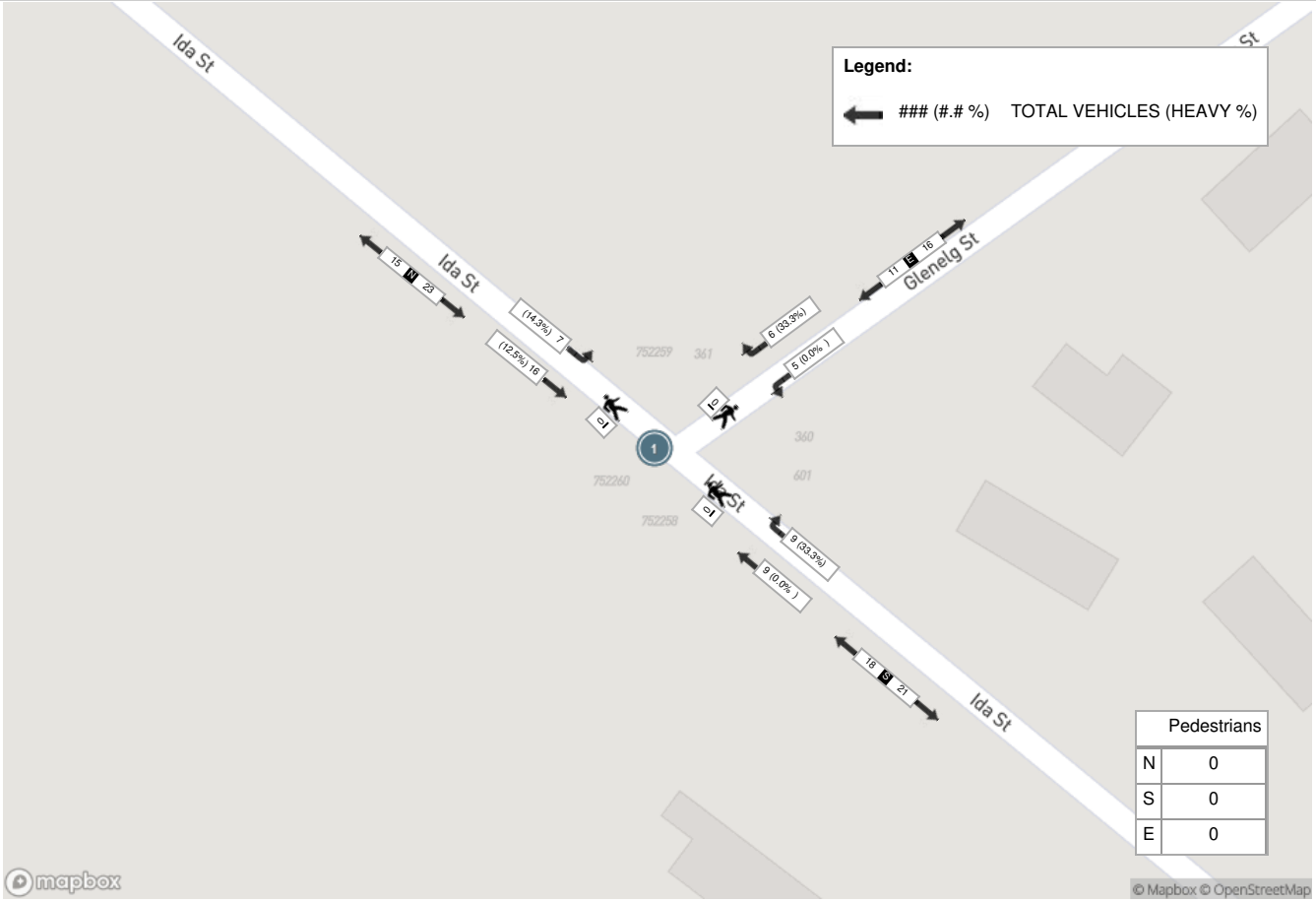
Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (12.76 °C)**

| Start Time | N Approach IDA ST | | | | | E Approach GLENELG ST | | | | | S Approach IDA ST | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Left | UTurn | Peds | Approach Total | Right | Left | UTurn | Peds | Approach Total | Right | Thru | UTurn | Peds | Approach Total | |
| 16:45:00 | 3 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 8 |
| 17:00:00 | 3 | 4 | 0 | 0 | 7 | 3 | 5 | 0 | 0 | 8 | 2 | 6 | 0 | 0 | 8 | 23 |
| 17:15:00 | 6 | 4 | 0 | 0 | 10 | 2 | 1 | 0 | 0 | 3 | 4 | 4 | 0 | 0 | 8 | 21 |
| 17:30:00 | 4 | 1 | 0 | 0 | 5 | 4 | 2 | 0 | 0 | 6 | 1 | 10 | 0 | 0 | 11 | 22 |
| **Grand Total** | 16 | 9 | 0 | 0 | 25 | 11 | 9 | 0 | 0 | 20 | 7 | 22 | 0 | 0 | 29 | **74** |
| **Approach%** | 64% | 36% | 0% | | - | 55% | 45% | 0% | | - | 24.1% | 75.9% | 0% | | - | **-** |
| **Totals %** | 21.6% | 12.2% | 0% | | 33.8% | 14.9% | 12.2% | 0% | | 27% | 9.5% | 29.7% | 0% | | 39.2% | **-** |
| **PHF** | 0.67 | 0.56 | 0 | | 0.63 | 0.69 | 0.45 | 0 | | 0.63 | 0.44 | 0.55 | 0 | | 0.66 | **-** |
| **Heavy** | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Heavy %** | 6.3% | 0% | 0% | | 4% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Lights** | 15 | 9 | 0 | | 24 | 11 | 9 | 0 | | 20 | 7 | 22 | 0 | | 29 | **-** |
| **Lights %** | 93.8% | 100% | 0% | | 96% | 100% | 100% | 0% | | 100% | 100% | 100% | 0% | | 100% | **-** |
| **Single-Unit Trucks** | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Single-Unit Trucks %** | 6.3% | 0% | 0% | | 4% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Buses** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Buses %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Bicycles on Road** | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Bicycles on Road %** | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | 0% | | - | - | - | 0% | | - | - | - | 0% | | **-** |

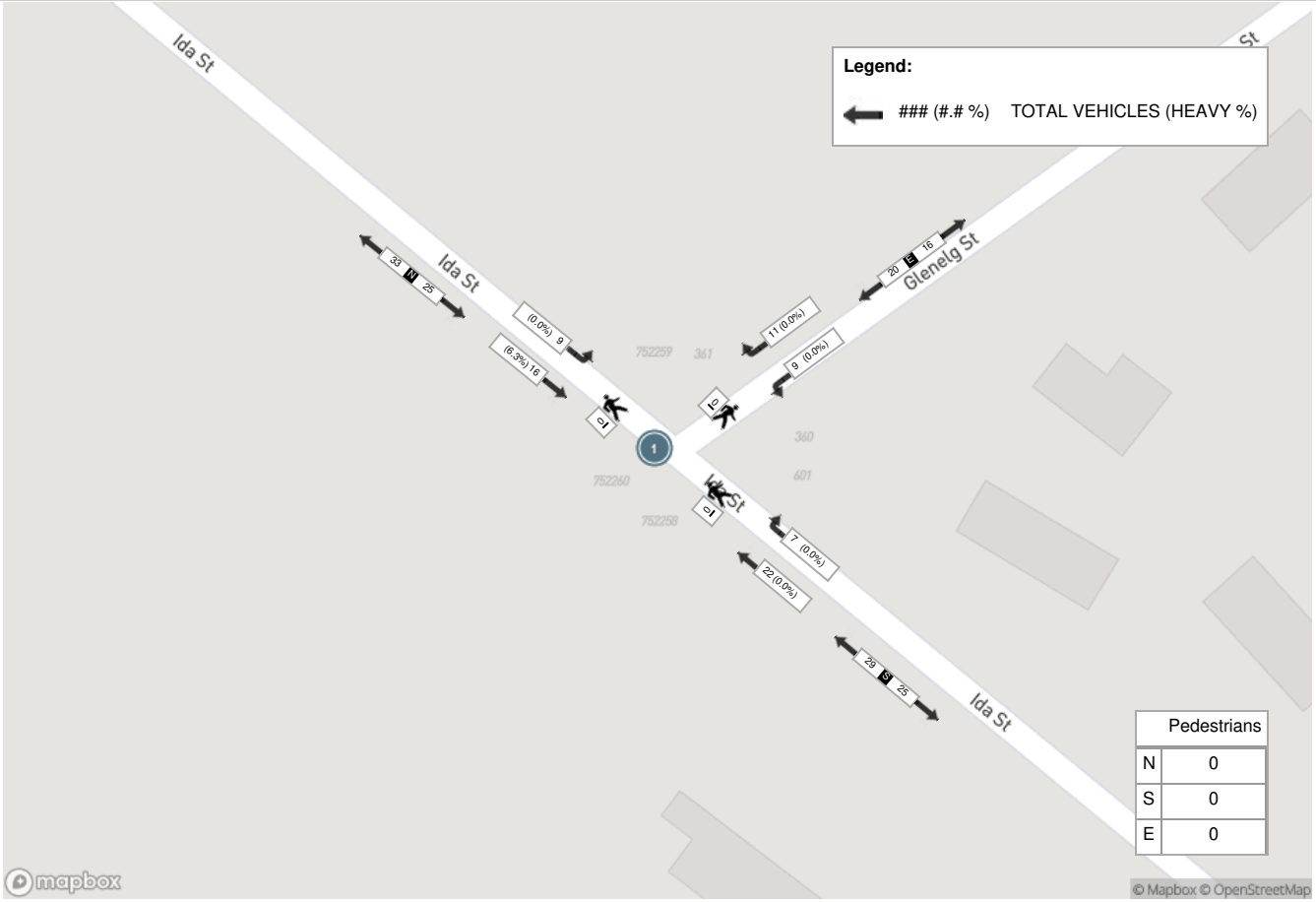
Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 07:45 AM - 08:45 AM Weather: Overcast Clouds (16.73 °C)**



Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (12.76 °C)**



Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

## Turning Movement Count (3 . IDA ST & MAIN ST)

| Start Time | N Approach IDA ST | | | | | | E Approach MAIN ST (GREY RD 9 | | | | | | S Approach IDA ST | | | | | | W Approach MAIN ST (GREY RD 9 | | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right N:W | Thru N:S | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Thru E:W | Left E:S | UTurn E:E | Peds E: | Approach Total | Right S:E | Thru S:N | Left S:W | UTurn S:S | Peds S: | Approach Total | Right W:S | Thru W:E | Left W:N | UTurn W:W | Peds W: | Approach Total | | |
| 06:00:00 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 13 | 1 | 0 | 0 | 14 | 1 | 0 | 2 | 0 | 0 | 3 | 8 | 16 | 1 | 0 | 0 | 25 | 45 | |
| 06:15:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 20 | 5 | 0 | 0 | 25 | 0 | 0 | 3 | 0 | 0 | 3 | 5 | 9 | 0 | 0 | 0 | 14 | 44 | |
| 06:30:00 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 22 | 3 | 0 | 0 | 25 | 2 | 0 | 3 | 0 | 0 | 5 | 2 | 16 | 1 | 0 | 0 | 19 | 50 | |
| 06:45:00 | 1 | 1 | 1 | 0 | 0 | 3 | 4 | 12 | 5 | 0 | 6 | 21 | 6 | 3 | 5 | 0 | 0 | 14 | 3 | 15 | 0 | 0 | 0 | 18 | 56 | 195 |
| 07:00:00 | 0 | 1 | 3 | 0 | 0 | 4 | 1 | 12 | 4 | 0 | 0 | 17 | 8 | 3 | 5 | 0 | 0 | 16 | 4 | 8 | 2 | 0 | 0 | 14 | 51 | 201 |
| 07:15:00 | 1 | 5 | 2 | 0 | 0 | 8 | 3 | 16 | 6 | 0 | 0 | 25 | 4 | 0 | 1 | 0 | 0 | 5 | 8 | 25 | 0 | 0 | 0 | 33 | 71 | 228 |
| 07:30:00 | 0 | 6 | 2 | 0 | 0 | 8 | 1 | 22 | 5 | 0 | 0 | 28 | 3 | 1 | 3 | 0 | 0 | 7 | 3 | 20 | 2 | 0 | 0 | 25 | 68 | 246 |
| 07:45:00 | 4 | 2 | 5 | 0 | 0 | 11 | 1 | 16 | 3 | 0 | 0 | 20 | 3 | 2 | 3 | 0 | 0 | 8 | 7 | 26 | 2 | 0 | 0 | 35 | 74 | 264 |
| 08:00:00 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 15 | 7 | 0 | 1 | 22 | 7 | 1 | 4 | 0 | 0 | 12 | 2 | 30 | 1 | 0 | 0 | 33 | 70 | 283 |
| 08:15:00 | 2 | 5 | 2 | 0 | 0 | 9 | 0 | 12 | 8 | 0 | 0 | 20 | 4 | 0 | 1 | 0 | 0 | 5 | 4 | 31 | 2 | 0 | 0 | 37 | 71 | 283 |
| 08:30:00 | 0 | 2 | 4 | 0 | 0 | 6 | 7 | 21 | 13 | 0 | 0 | 41 | 7 | 1 | 3 | 0 | 0 | 11 | 6 | 29 | 1 | 0 | 1 | 36 | 94 | 309 |
| 08:45:00 | 1 | 3 | 4 | 0 | 0 | 8 | 3 | 16 | 8 | 0 | 1 | 27 | 6 | 0 | 3 | 0 | 0 | 9 | 5 | 24 | 1 | 0 | 0 | 30 | 74 | 309 |
| 09:00:00 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 18 | 6 | 0 | 0 | 26 | 9 | 2 | 3 | 0 | 0 | 14 | 4 | 23 | 0 | 0 | 0 | 27 | 68 | 307 |
| 09:15:00 | 1 | 1 | 1 | 0 | 0 | 3 | 1 | 19 | 4 | 0 | 0 | 24 | 6 | 1 | 0 | 0 | 0 | 7 | 4 | 21 | 0 | 0 | 0 | 25 | 59 | 295 |
| 09:30:00 | 1 | 2 | 1 | 0 | 0 | 4 | 2 | 18 | 5 | 0 | 0 | 25 | 7 | 0 | 6 | 0 | 0 | 13 | 2 | 29 | 1 | 0 | 0 | 32 | 74 | 275 |
| 09:45:00 | 0 | 2 | 4 | 0 | 0 | 6 | 2 | 17 | 10 | 0 | 0 | 29 | 7 | 2 | 1 | 0 | 0 | 10 | 5 | 27 | 0 | 0 | 0 | 32 | 77 | 278 |
| ***BREAK*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15:00:00 | 1 | 3 | 1 | 0 | 0 | 5 | 3 | 25 | 6 | 0 | 0 | 34 | 10 | 3 | 5 | 0 | 0 | 18 | 0 | 31 | 2 | 0 | 0 | 33 | 90 | |
| 15:15:00 | 3 | 2 | 3 | 0 | 0 | 8 | 4 | 28 | 16 | 0 | 0 | 48 | 7 | 5 | 4 | 0 | 0 | 16 | 5 | 20 | 0 | 0 | 0 | 25 | 97 | |
| 15:30:00 | 3 | 4 | 1 | 0 | 0 | 8 | 3 | 19 | 5 | 0 | 0 | 27 | 8 | 5 | 7 | 0 | 0 | 20 | 7 | 21 | 2 | 0 | 0 | 30 | 85 | |
| 15:45:00 | 5 | 3 | 1 | 0 | 0 | 9 | 1 | 31 | 8 | 0 | 0 | 40 | 11 | 1 | 8 | 0 | 0 | 20 | 3 | 24 | 0 | 0 | 0 | 27 | 96 | 368 |
| 16:00:00 | 1 | 1 | 1 | 0 | 2 | 3 | 3 | 31 | 7 | 0 | 0 | 41 | 6 | 3 | 5 | 0 | 0 | 14 | 5 | 32 | 1 | 0 | 0 | 38 | 96 | 374 |
| 16:15:00 | 0 | 3 | 4 | 0 | 0 | 7 | 2 | 37 | 10 | 0 | 1 | 49 | 8 | 3 | 5 | 0 | 0 | 16 | 2 | 24 | 2 | 0 | 0 | 28 | 100 | 377 |
| 16:30:00 | 2 | 1 | 3 | 0 | 1 | 6 | 3 | 34 | 7 | 0 | 2 | 44 | 13 | 7 | 4 | 0 | 1 | 24 | 4 | 23 | 4 | 0 | 0 | 31 | 105 | 397 |
| 16:45:00 | 1 | 2 | 3 | 0 | 1 | 6 | 3 | 22 | 9 | 0 | 1 | 34 | 8 | 2 | 2 | 0 | 0 | 12 | 3 | 24 | 0 | 0 | 0 | 27 | 79 | 380 |
| 17:00:00 | 2 | 3 | 3 | 0 | 1 | 8 | 4 | 28 | 9 | 0 | 0 | 41 | 10 | 3 | 8 | 0 | 0 | 21 | 6 | 26 | 1 | 0 | 0 | 33 | 103 | 387 |
| 17:15:00 | 3 | 4 | 1 | 0 | 0 | 8 | 3 | 35 | 3 | 0 | 0 | 41 | 11 | 4 | 7 | 0 | 0 | 22 | 0 | 33 | 3 | 0 | 0 | 36 | 107 | 394 |
| 17:30:00 | 1 | 2 | 3 | 0 | 0 | 6 | 4 | 25 | 0 | 0 | 0 | 29 | 7 | 8 | 1 | 0 | 0 | 16 | 4 | 29 | 1 | 0 | 0 | 34 | 85 | 374 |
| 17:45:00 | 2 | 0 | 3 | 0 | 0 | 5 | 2 | 20 | 5 | 0 | 0 | 27 | 5 | 1 | 4 | 0 | 0 | 10 | 3 | 25 | 0 | 0 | 0 | 28 | 70 | 365 |
| 18:00:00 | 0 | 1 | 3 | 0 | 0 | 4 | 1 | 25 | 0 | 0 | 0 | 26 | 4 | 4 | 5 | 0 | 0 | 13 | 3 | 15 | 2 | 0 | 0 | 20 | 63 | 325 |
| 18:15:00 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 13 | 2 | 0 | 0 | 15 | 2 | 3 | 7 | 0 | 0 | 12 | 2 | 30 | 1 | 0 | 0 | 33 | 63 | 281 |
| 18:30:00 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 4 | 0 | 0 | 21 | 8 | 4 | 1 | 0 | 0 | 13 | 1 | 19 | 1 | 0 | 0 | 21 | 57 | 253 |
| 18:45:00 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 13 | 2 | 0 | 0 | 18 | 1 | 4 | 2 | 0 | 0 | 7 | 0 | 24 | 1 | 0 | 0 | 25 | 53 | 236 |
| **Grand Total** | 37 | 65 | 69 | 0 | 5 | 171 | 67 | 671 | 186 | 0 | 12 | 924 | 199 | 76 | 121 | 0 | 1 | 396 | 120 | 749 | 35 | 0 | 1 | 904 | **2395** | - |
| **Approach%** | 21.6% | 38% | 40.4% | 0% | | - | 7.3% | 72.6% | 20.1% | 0% | | - | 50.3% | 19.2% | 30.6% | 0% | | - | 13.3% | 82.9% | 3.9% | 0% | | - | - | - |
| **Totals %** | 1.5% | 2.7% | 2.9% | 0% | | 7.1% | 2.8% | 28% | 7.8% | 0% | | 38.6% | 8.3% | 3.2% | 5.1% | 0% | | 16.5% | 5% | 31.3% | 1.5% | 0% | | 37.7% | - | - |
| **Heavy** | 5 | 3 | 2 | 0 | | - | 4 | 67 | 61 | 0 | | - | 39 | 4 | 20 | 0 | | - | 19 | 75 | 9 | 0 | | - | - | - |
| **Heavy %** | 13.5% | 4.6% | 2.9% | 0% | | - | 6% | 10% | 32.8% | 0% | | - | 19.6% | 5.3% | 16.5% | 0% | | - | 15.8% | 10% | 25.7% | 0% | | - | - | - |
| **Bicycles** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - |
| **Bicycle %** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (16.73 °C)**

| Start Time | N Approach IDA ST | | | | | | E Approach MAIN ST (GREY RD 9 | | | | | | S Approach IDA ST | | | | | | W Approach MAIN ST (GREY RD 9 | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 08:00:00 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 15 | 7 | 0 | 1 | 22 | 7 | 1 | 4 | 0 | 0 | 12 | 2 | 30 | 1 | 0 | 0 | 33 | 70 |
| 08:15:00 | 2 | 5 | 2 | 0 | 0 | 9 | 0 | 12 | 8 | 0 | 0 | 20 | 4 | 0 | 1 | 0 | 0 | 5 | 4 | 31 | 2 | 0 | 0 | 37 | 71 |
| 08:30:00 | 0 | 2 | 4 | 0 | 0 | 6 | 7 | 21 | 13 | 0 | 0 | 41 | 7 | 1 | 3 | 0 | 0 | 11 | 6 | 29 | 1 | 0 | 1 | 36 | 94 |
| 08:45:00 | 1 | 3 | 4 | 0 | 0 | 8 | 3 | 16 | 8 | 0 | 1 | 27 | 6 | 0 | 3 | 0 | 0 | 9 | 5 | 24 | 1 | 0 | 0 | 30 | 74 |
| **Grand Total** | 3 | 11 | 12 | 0 | 0 | 26 | 10 | 64 | 36 | 0 | 2 | 110 | 24 | 2 | 11 | 0 | 0 | 37 | 17 | 114 | 5 | 0 | 1 | 136 | **309** |
| **Approach%** | 11.5% | 42.3% | 46.2% | 0% | | - | 9.1% | 58.2% | 32.7% | 0% | | - | 64.9% | 5.4% | 29.7% | 0% | | - | 12.5% | 83.8% | 3.7% | 0% | | - | **-** |
| **Totals %** | 1% | 3.6% | 3.9% | 0% | | 8.4% | 3.2% | 20.7% | 11.7% | 0% | | 35.6% | 7.8% | 0.6% | 3.6% | 0% | | 12% | 5.5% | 36.9% | 1.6% | 0% | | 44% | **-** |
| **PHF** | 0.38 | 0.55 | 0.75 | 0 | | 0.72 | 0.36 | 0.76 | 0.69 | 0 | | 0.67 | 0.86 | 0.5 | 0.69 | 0 | | 0.77 | 0.71 | 0.92 | 0.63 | 0 | | 0.92 | **-** |
| **Heavy** | 0 | 1 | 1 | 0 | | 2 | 1 | 9 | 19 | 0 | | 29 | 6 | 0 | 1 | 0 | | 7 | 6 | 20 | 1 | 0 | | 27 | **-** |
| **Heavy %** | 0% | 9.1% | 8.3% | 0% | | 7.7% | 10% | 14.1% | 52.8% | 0% | | 26.4% | 25% | 0% | 9.1% | 0% | | 18.9% | 35.3% | 17.5% | 20% | 0% | | 19.9% | **-** |
| **Lights** | 3 | 10 | 11 | 0 | | 24 | 9 | 55 | 17 | 0 | | 81 | 18 | 2 | 10 | 0 | | 30 | 11 | 94 | 4 | 0 | | 109 | **-** |
| **Lights %** | 100% | 90.9% | 91.7% | 0% | | 92.3% | 90% | 85.9% | 47.2% | 0% | | 73.6% | 75% | 100% | 90.9% | 0% | | 81.1% | 64.7% | 82.5% | 80% | 0% | | 80.1% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 1 | 0 | | 1 | 0 | 3 | 5 | 0 | | 8 | 4 | 0 | 0 | 0 | | 4 | 0 | 15 | 0 | 0 | | 15 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 8.3% | 0% | | 3.8% | 0% | 4.7% | 13.9% | 0% | | 7.3% | 16.7% | 0% | 0% | 0% | | 10.8% | 0% | 13.2% | 0% | 0% | | 11% | **-** |
| **Buses** | 0 | 1 | 0 | 0 | | 1 | 1 | 1 | 11 | 0 | | 13 | 1 | 0 | 0 | 0 | | 1 | 2 | 2 | 1 | 0 | | 5 | **-** |
| **Buses %** | 0% | 9.1% | 0% | 0% | | 3.8% | 10% | 1.6% | 30.6% | 0% | | 11.8% | 4.2% | 0% | 0% | 0% | | 2.7% | 11.8% | 1.8% | 20% | 0% | | 3.7% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 5 | 3 | 0 | | 8 | 1 | 0 | 1 | 0 | | 2 | 4 | 3 | 0 | 0 | | 7 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 7.8% | 8.3% | 0% | | 7.3% | 4.2% | 0% | 9.1% | 0% | | 5.4% | 23.5% | 2.6% | 0% | 0% | | 5.1% | **-** |
| **Pedestrians** | - | - | - | - | 0 | - | - | - | - | - | 2 | - | - | - | - | - | 0 | - | - | - | - | - | 1 | - | **-** |
| **Pedestrians%** | - | - | - | - | 0% | | - | - | - | - | 66.7% | | - | - | - | - | 0% | | - | - | - | - | 33.3% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

Spectrum

Turning Movement Count
Location Name: IDA ST & MAIN ST
Date: Tue, Jun 07, 2022 Deployment Lead: Tasos Issaaakidis

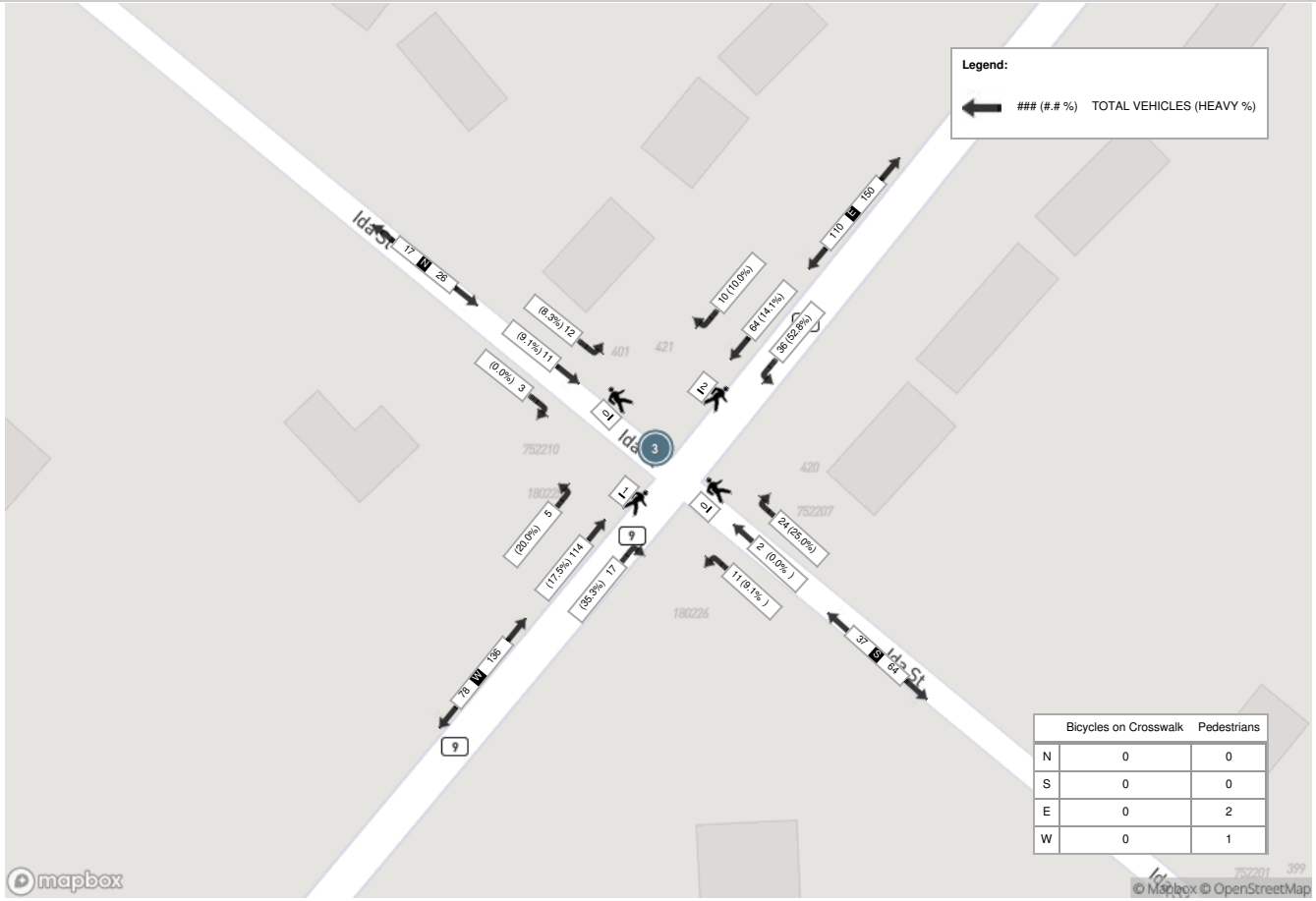
Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:45 PM - 04:45 PM Weather: Overcast Clouds (12.76 °C)**

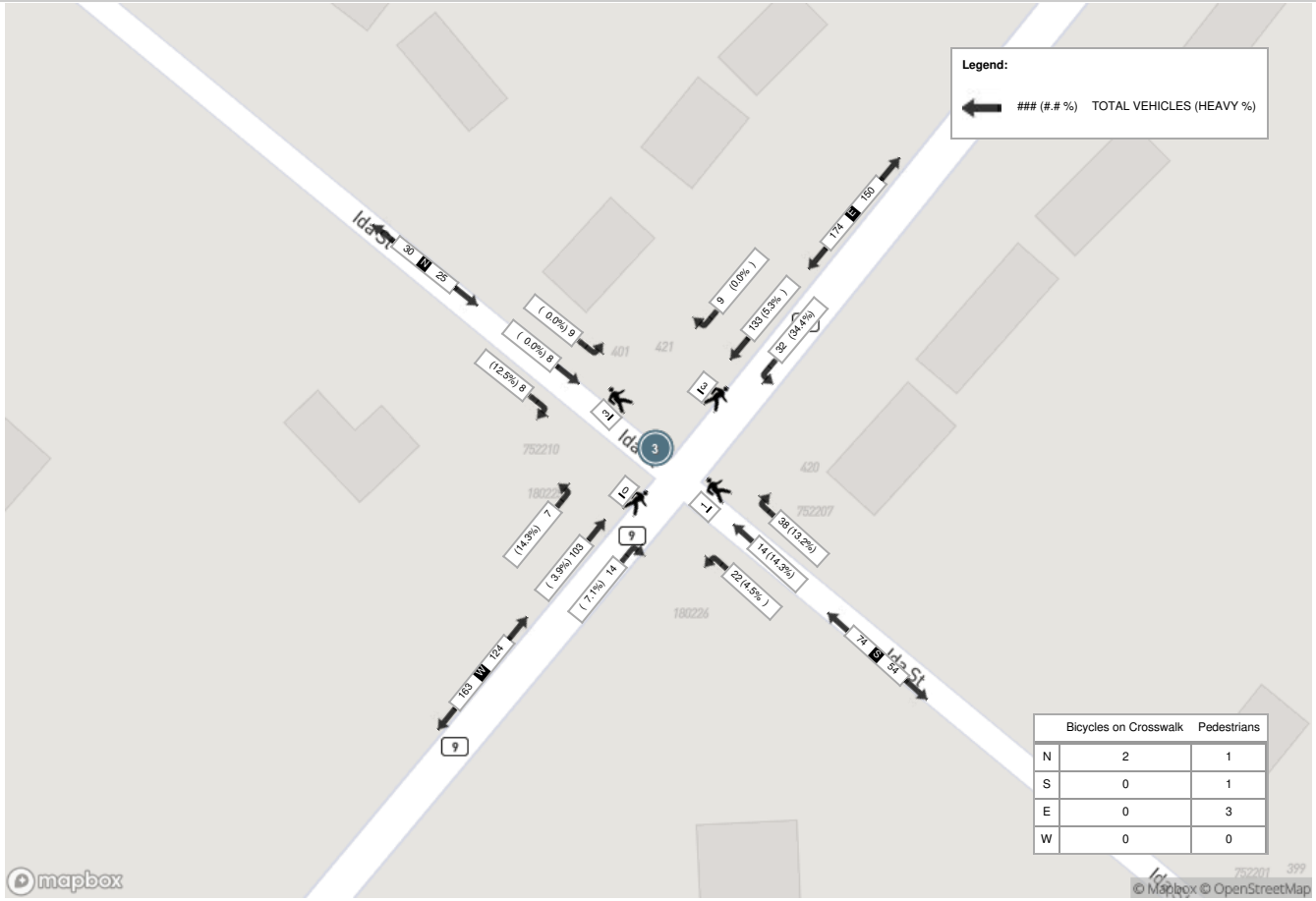
| Start Time | N Approach IDA ST | | | | | | E Approach MAIN ST (GREY RD 9 | | | | | | S Approach IDA ST | | | | | | W Approach MAIN ST (GREY RD 9 | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 15:45:00 | 5 | 3 | 1 | 0 | 0 | 9 | 1 | 31 | 8 | 0 | 0 | 40 | 11 | 1 | 8 | 0 | 0 | 20 | 3 | 24 | 0 | 0 | 0 | 27 | 96 |
| 16:00:00 | 1 | 1 | 1 | 0 | 2 | 3 | 3 | 31 | 7 | 0 | 0 | 41 | 6 | 3 | 5 | 0 | 0 | 14 | 5 | 32 | 1 | 0 | 0 | 38 | 96 |
| 16:15:00 | 0 | 3 | 4 | 0 | 0 | 7 | 2 | 37 | 10 | 0 | 1 | 49 | 8 | 3 | 5 | 0 | 0 | 16 | 2 | 24 | 2 | 0 | 0 | 28 | 100 |
| 16:30:00 | 2 | 1 | 3 | 0 | 1 | 6 | 3 | 34 | 7 | 0 | 2 | 44 | 13 | 7 | 4 | 0 | 1 | 24 | 4 | 23 | 4 | 0 | 0 | 31 | 105 |
| **Grand Total** | 8 | 8 | 9 | 0 | 3 | 25 | 9 | 133 | 32 | 0 | 3 | 174 | 38 | 14 | 22 | 0 | 1 | 74 | 14 | 103 | 7 | 0 | 0 | 124 | **397** |
| **Approach%** | 32% | 32% | 36% | 0% | | - | 5.2% | 76.4% | 18.4% | 0% | | - | 51.4% | 18.9% | 29.7% | 0% | | - | 11.3% | 83.1% | 5.6% | 0% | | - | **-** |
| **Totals %** | 2% | 2% | 2.3% | 0% | | 6.3% | 2.3% | 33.5% | 8.1% | 0% | | 43.8% | 9.6% | 3.5% | 5.5% | 0% | | 18.6% | 3.5% | 25.9% | 1.8% | 0% | | 31.2% | **-** |
| **PHF** | 0.4 | 0.67 | 0.56 | 0 | | 0.69 | 0.75 | 0.9 | 0.8 | 0 | | 0.89 | 0.73 | 0.5 | 0.69 | 0 | | 0.77 | 0.7 | 0.8 | 0.44 | 0 | | 0.82 | **-** |
| **Heavy** | 1 | 0 | 0 | 0 | | 1 | 0 | 7 | 11 | 0 | | 18 | 5 | 2 | 1 | 0 | | 8 | 1 | 4 | 1 | 0 | | 6 | **-** |
| **Heavy %** | 12.5% | 0% | 0% | 0% | | 4% | 0% | 5.3% | 34.4% | 0% | | 10.3% | 13.2% | 14.3% | 4.5% | 0% | | 10.8% | 7.1% | 3.9% | 14.3% | 0% | | 4.8% | **-** |
| **Lights** | 7 | 8 | 9 | 0 | | 24 | 9 | 126 | 21 | 0 | | 156 | 33 | 12 | 21 | 0 | | 66 | 13 | 99 | 6 | 0 | | 118 | **-** |
| **Lights %** | 87.5% | 100% | 100% | 0% | | 96% | 100% | 94.7% | 65.6% | 0% | | 89.7% | 86.8% | 85.7% | 95.5% | 0% | | 89.2% | 92.9% | 96.1% | 85.7% | 0% | | 95.2% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 3 | 6 | 0 | | 9 | 2 | 1 | 0 | 0 | | 3 | 0 | 1 | 1 | 0 | | 2 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 2.3% | 18.8% | 0% | | 5.2% | 5.3% | 7.1% | 0% | 0% | | 4.1% | 0% | 1% | 14.3% | 0% | | 1.6% | **-** |
| **Buses** | 1 | 0 | 0 | 0 | | 1 | 0 | 2 | 0 | 0 | | 2 | 0 | 1 | 0 | 0 | | 1 | 0 | 3 | 0 | 0 | | 3 | **-** |
| **Buses %** | 12.5% | 0% | 0% | 0% | | 4% | 0% | 1.5% | 0% | 0% | | 1.1% | 0% | 7.1% | 0% | 0% | | 1.4% | 0% | 2.9% | 0% | 0% | | 2.4% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 2 | 5 | 0 | | 7 | 3 | 0 | 1 | 0 | | 4 | 1 | 0 | 0 | 0 | | 1 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 1.5% | 15.6% | 0% | | 4% | 7.9% | 0% | 4.5% | 0% | | 5.4% | 7.1% | 0% | 0% | 0% | | 0.8% | **-** |
| **Pedestrians** | - | - | - | - | 1 | - | - | - | - | - | 3 | - | - | - | - | - | 1 | - | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | - | 14.3% | | - | - | - | - | 42.9% | | - | - | - | - | 14.3% | | - | - | - | - | 0% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | - | 2 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | - | 28.6% | | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:00 AM - 09:00 AM** **Weather: Overcast Clouds (16.73 °C)**



**Peak Hour: 03:45 PM - 04:45 PM Weather: Overcast Clouds (12.76 °C)**




| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 2 | 1 |
| S | 0 | 1 |
| E | 0 | 3 |
| W | 0 | 0 |

Spectrum

Turning Movement Count
Location Name: MAIN ST & OSPREY ST
Date: Tue, Jun 07, 2022 Deployment Lead: Tasos Issaaakidis

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

## Turning Movement Count (5 . MAIN ST & OSPREY ST)

| Start Time | N Approach OSPREY ST | | | | | | E Approach MAIN ST | | | | | | S Approach OSPREY ST | | | | | | W Approach MAIN ST | | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right N:W | Thru N:S | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Thru E:W | Left E:S | UTurn E:E | Peds E: | Approach Total | Right S:E | Thru S:N | Left S:W | UTurn S:S | Peds S: | Approach Total | Right W:S | Thru W:E | Left W:N | UTurn W:W | Peds W: | Approach Total | | |
| 06:00:00 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 17 | 0 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 30 | 0 | 0 | 0 | 30 | 55 | |
| 06:15:00 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 23 | 1 | 0 | 0 | 24 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 24 | 0 | 0 | 0 | 24 | 52 | |
| 06:30:00 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 22 | 3 | 0 | 0 | 25 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 32 | 0 | 0 | 0 | 32 | 65 | |
| 06:45:00 | 0 | 0 | 3 | 0 | 1 | 3 | 0 | 23 | 1 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 37 | 0 | 0 | 3 | 38 | 65 | 237 |
| 07:00:00 | 0 | 1 | 7 | 0 | 0 | 8 | 0 | 26 | 2 | 0 | 0 | 28 | 3 | 1 | 1 | 0 | 0 | 5 | 0 | 40 | 0 | 0 | 1 | 40 | 81 | 263 |
| 07:15:00 | 1 | 0 | 9 | 0 | 0 | 10 | 0 | 31 | 2 | 0 | 1 | 33 | 1 | 0 | 2 | 0 | 3 | 3 | 0 | 38 | 0 | 0 | 0 | 38 | 84 | 295 |
| 07:30:00 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 30 | 1 | 0 | 0 | 31 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 41 | 1 | 0 | 0 | 43 | 77 | 307 |
| 07:45:00 | 1 | 0 | 4 | 0 | 1 | 5 | 0 | 33 | 1 | 0 | 0 | 34 | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 34 | 2 | 0 | 0 | 36 | 77 | 319 |
| 08:00:00 | 0 | 0 | 7 | 0 | 0 | 7 | 1 | 34 | 0 | 0 | 0 | 35 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 35 | 1 | 0 | 0 | 36 | 80 | 318 |
| 08:15:00 | 1 | 1 | 3 | 0 | 0 | 5 | 2 | 41 | 2 | 0 | 0 | 45 | 1 | 0 | 2 | 0 | 4 | 3 | 0 | 33 | 1 | 0 | 2 | 34 | 87 | 321 |
| 08:30:00 | 6 | 2 | 4 | 0 | 2 | 12 | 0 | 51 | 2 | 0 | 0 | 53 | 1 | 0 | 3 | 0 | 0 | 4 | 3 | 50 | 1 | 0 | 1 | 54 | 123 | 367 |
| 08:45:00 | 2 | 0 | 2 | 0 | 3 | 4 | 0 | 44 | 1 | 0 | 0 | 45 | 6 | 1 | 5 | 0 | 0 | 12 | 6 | 80 | 7 | 0 | 0 | 93 | 154 | 444 |
| 09:00:00 | 1 | 1 | 4 | 0 | 2 | 6 | 0 | 44 | 2 | 0 | 0 | 46 | 3 | 0 | 2 | 0 | 0 | 5 | 3 | 48 | 1 | 0 | 0 | 52 | 109 | 473 |
| 09:15:00 | 0 | 0 | 5 | 0 | 0 | 5 | 1 | 28 | 1 | 0 | 0 | 30 | 3 | 0 | 1 | 0 | 0 | 4 | 1 | 35 | 1 | 0 | 0 | 37 | 76 | 462 |
| 09:30:00 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 36 | 1 | 0 | 0 | 38 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 44 | 1 | 1 | 0 | 47 | 89 | 428 |
| 09:45:00 | 2 | 1 | 5 | 0 | 0 | 8 | 1 | 34 | 3 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 3 | 0 | 0 | 38 | 84 | 358 |
| ***BREAK*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15:00:00 | 2 | 1 | 0 | 0 | 1 | 3 | 0 | 53 | 3 | 0 | 1 | 56 | 5 | 2 | 1 | 0 | 1 | 8 | 0 | 50 | 4 | 0 | 0 | 54 | 121 | |
| 15:15:00 | 2 | 0 | 5 | 0 | 6 | 7 | 1 | 46 | 3 | 0 | 2 | 50 | 2 | 2 | 1 | 0 | 0 | 5 | 7 | 59 | 5 | 0 | 4 | 71 | 133 | |
| 15:30:00 | 3 | 1 | 3 | 0 | 9 | 7 | 0 | 39 | 0 | 0 | 1 | 39 | 5 | 2 | 0 | 0 | 3 | 7 | 1 | 56 | 4 | 0 | 0 | 61 | 114 | |
| 15:45:00 | 1 | 0 | 3 | 0 | 2 | 4 | 1 | 59 | 2 | 0 | 3 | 62 | 3 | 0 | 0 | 0 | 6 | 3 | 1 | 42 | 1 | 0 | 0 | 44 | 113 | 481 |
| 16:00:00 | 1 | 2 | 2 | 0 | 1 | 5 | 0 | 45 | 3 | 0 | 3 | 48 | 7 | 1 | 3 | 0 | 0 | 11 | 2 | 46 | 4 | 1 | 0 | 53 | 117 | 477 |
| 16:15:00 | 1 | 1 | 2 | 0 | 8 | 4 | 0 | 64 | 2 | 0 | 2 | 66 | 2 | 1 | 4 | 0 | 0 | 7 | 1 | 46 | 2 | 0 | 0 | 49 | 126 | 470 |
| 16:30:00 | 1 | 0 | 3 | 0 | 5 | 4 | 0 | 56 | 1 | 0 | 0 | 57 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 44 | 2 | 0 | 1 | 48 | 110 | 466 |
| 16:45:00 | 0 | 0 | 3 | 0 | 3 | 3 | 0 | 48 | 2 | 0 | 0 | 50 | 1 | 1 | 1 | 0 | 0 | 3 | 2 | 44 | 4 | 0 | 0 | 50 | 106 | 459 |
| 17:00:00 | 0 | 0 | 2 | 0 | 7 | 2 | 0 | 53 | 4 | 0 | 0 | 57 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 55 | 0 | 0 | 2 | 57 | 118 | 460 |
| 17:15:00 | 1 | 2 | 3 | 0 | 2 | 6 | 1 | 52 | 2 | 0 | 0 | 55 | 4 | 0 | 1 | 0 | 1 | 5 | 0 | 46 | 1 | 0 | 0 | 47 | 113 | 447 |
| 17:30:00 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 42 | 1 | 0 | 0 | 43 | 6 | 1 | 0 | 0 | 0 | 7 | 0 | 48 | 3 | 0 | 0 | 51 | 102 | 439 |
| 17:45:00 | 2 | 0 | 0 | 0 | 5 | 2 | 1 | 48 | 4 | 0 | 0 | 53 | 3 | 0 | 1 | 0 | 0 | 4 | 3 | 33 | 5 | 0 | 0 | 41 | 100 | 433 |
| 18:00:00 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 31 | 4 | 0 | 0 | 35 | 3 | 2 | 0 | 0 | 0 | 5 | 1 | 32 | 0 | 0 | 0 | 33 | 74 | 389 |
| 18:15:00 | 2 | 0 | 6 | 0 | 0 | 8 | 1 | 25 | 0 | 0 | 0 | 26 | 2 | 1 | 1 | 0 | 0 | 4 | 2 | 35 | 2 | 0 | 0 | 39 | 77 | 353 |
| 18:30:00 | 0 | 2 | 4 | 0 | 1 | 6 | 0 | 42 | 2 | 0 | 3 | 44 | 2 | 1 | 0 | 0 | 0 | 3 | 1 | 25 | 0 | 0 | 0 | 26 | 79 | 330 |
| 18:45:00 | 1 | 1 | 4 | 0 | 0 | 6 | 0 | 29 | 5 | 0 | 0 | 34 | 2 | 1 | 0 | 0 | 1 | 3 | 1 | 40 | 2 | 0 | 0 | 43 | 86 | 316 |
| **Grand Total** | 31 | 17 | 111 | 0 | 62 | 159 | 11 | 1249 | 61 | 0 | 16 | 1321 | 75 | 19 | 34 | 0 | 21 | 128 | 42 | 1337 | 58 | 2 | 14 | 1439 | **3047** | - |
| **Approach%** | 19.5% | 10.7% | 69.8% | 0% | | - | 0.8% | 94.5% | 4.6% | 0% | | - | 58.6% | 14.8% | 26.6% | 0% | | - | 2.9% | 92.9% | 4% | 0.1% | | - | **-** | - |
| **Totals %** | 1% | 0.6% | 3.6% | 0% | | 5.2% | 0.4% | 41% | 2% | 0% | | 43.4% | 2.5% | 0.6% | 1.1% | 0% | | 4.2% | 1.4% | 43.9% | 1.9% | 0.1% | | 47.2% | **-** | - |
| **Heavy** | 0 | 0 | 2 | 0 | | - | 0 | 124 | 2 | 0 | | - | 4 | 1 | 2 | 0 | | - | 0 | 131 | 1 | 0 | | - | **-** | - |
| **Heavy %** | 0% | 0% | 1.8% | 0% | | - | 0% | 9.9% | 3.3% | 0% | | - | 5.3% | 5.3% | 5.9% | 0% | | - | 0% | 9.8% | 1.7% | 0% | | - | **-** | - |
| **Bicycles** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | **-** | - |
| **Bicycle %** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | **-** | - |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:15 AM - 09:15 AM Weather: Overcast Clouds (16.73 °C)**

| Start Time | N Approach OSPREY ST | | | | | | E Approach MAIN ST | | | | | | S Approach OSPREY ST | | | | | | W Approach MAIN ST | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 08:15:00 | 1 | 1 | 3 | 0 | 0 | 5 | 2 | 41 | 2 | 0 | 0 | 45 | 1 | 0 | 2 | 0 | 4 | 3 | 0 | 33 | 1 | 0 | 2 | 34 | 87 |
| 08:30:00 | 6 | 2 | 4 | 0 | 2 | 12 | 0 | 51 | 2 | 0 | 0 | 53 | 1 | 0 | 3 | 0 | 0 | 4 | 3 | 50 | 1 | 0 | 1 | 54 | 123 |
| 08:45:00 | 2 | 0 | 2 | 0 | 3 | 4 | 0 | 44 | 1 | 0 | 0 | 45 | 6 | 1 | 5 | 0 | 0 | 12 | 6 | 80 | 7 | 0 | 0 | 93 | 154 |
| 09:00:00 | 1 | 1 | 4 | 0 | 2 | 6 | 0 | 44 | 2 | 0 | 0 | 46 | 3 | 0 | 2 | 0 | 0 | 5 | 3 | 48 | 1 | 0 | 0 | 52 | 109 |
| **Grand Total** | 10 | 4 | 13 | 0 | 7 | 27 | 2 | 180 | 7 | 0 | 0 | 189 | 11 | 1 | 12 | 0 | 4 | 24 | 12 | 211 | 10 | 0 | 3 | 233 | **473** |
| **Approach%** | 37% | 14.8% | 48.1% | 0% | | - | 1.1% | 95.2% | 3.7% | 0% | | - | 45.8% | 4.2% | 50% | 0% | | - | 5.2% | 90.6% | 4.3% | 0% | | - | **-** |
| **Totals %** | 2.1% | 0.8% | 2.7% | 0% | | 5.7% | 0.4% | 38.1% | 1.5% | 0% | | 40% | 2.3% | 0.2% | 2.5% | 0% | | 5.1% | 2.5% | 44.6% | 2.1% | 0% | | 49.3% | **-** |
| **PHF** | 0.42 | 0.5 | 0.81 | 0 | | 0.56 | 0.25 | 0.88 | 0.88 | 0 | | 0.89 | 0.46 | 0.25 | 0.6 | 0 | | 0.5 | 0.5 | 0.66 | 0.36 | 0 | | 0.63 | **-** |
| **Heavy** | 0 | 0 | 1 | 0 | | 1 | 0 | 26 | 0 | 0 | | 26 | 2 | 0 | 1 | 0 | | 3 | 0 | 29 | 0 | 0 | | 29 | **-** |
| **Heavy %** | 0% | 0% | 7.7% | 0% | | 3.7% | 0% | 14.4% | 0% | 0% | | 13.8% | 18.2% | 0% | 8.3% | 0% | | 12.5% | 0% | 13.7% | 0% | 0% | | 12.4% | **-** |
| **Lights** | 10 | 4 | 12 | 0 | | 26 | 2 | 154 | 7 | 0 | | 163 | 9 | 1 | 11 | 0 | | 21 | 12 | 182 | 10 | 0 | | 204 | **-** |
| **Lights %** | 100% | 100% | 92.3% | 0% | | 96.3% | 100% | 85.6% | 100% | 0% | | 86.2% | 81.8% | 100% | 91.7% | 0% | | 87.5% | 100% | 86.3% | 100% | 0% | | 87.6% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 11 | 0 | 0 | | 11 | 0 | 0 | 0 | 0 | | 0 | 0 | 21 | 0 | 0 | | 21 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 6.1% | 0% | 0% | | 5.8% | 0% | 0% | 0% | 0% | | 0% | 0% | 10% | 0% | 0% | | 9% | **-** |
| **Buses** | 0 | 0 | 1 | 0 | | 1 | 0 | 6 | 0 | 0 | | 6 | 2 | 0 | 1 | 0 | | 3 | 0 | 4 | 0 | 0 | | 4 | **-** |
| **Buses %** | 0% | 0% | 7.7% | 0% | | 3.7% | 0% | 3.3% | 0% | 0% | | 3.2% | 18.2% | 0% | 8.3% | 0% | | 12.5% | 0% | 1.9% | 0% | 0% | | 1.7% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 9 | 0 | 0 | | 9 | 0 | 0 | 0 | 0 | | 0 | 0 | 4 | 0 | 0 | | 4 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 5% | 0% | 0% | | 4.8% | 0% | 0% | 0% | 0% | | 0% | 0% | 1.9% | 0% | 0% | | 1.7% | **-** |
| **Pedestrians** | - | - | - | - | 6 | - | - | - | - | - | 0 | - | - | - | - | - | 4 | - | - | - | - | - | 3 | - | **-** |
| **Pedestrians%** | - | - | - | - | 42.9% | | - | - | - | - | 0% | | - | - | - | - | 28.6% | | - | - | - | - | 21.4% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | - | 1 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | - | 7.1% | | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

Spectrum

Turning Movement Count
Location Name: MAIN ST & OSPREY ST
Date: Tue, Jun 07, 2022 Deployment Lead: Tasos Issaaakidis

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:00 PM - 04:00 PM Weather: Overcast Clouds (12.76 °C)**

| Start Time | N Approach OSPREY ST | | | | | | E Approach MAIN ST | | | | | | S Approach OSPREY ST | | | | | | W Approach MAIN ST | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 15:00:00 | 2 | 1 | 0 | 0 | 1 | 3 | 0 | 53 | 3 | 0 | 1 | 56 | 5 | 2 | 1 | 0 | 1 | 8 | 0 | 50 | 4 | 0 | 0 | 54 | 121 |
| 15:15:00 | 2 | 0 | 5 | 0 | 6 | 7 | 1 | 46 | 3 | 0 | 2 | 50 | 2 | 2 | 1 | 0 | 0 | 5 | 7 | 59 | 5 | 0 | 4 | 71 | 133 |
| 15:30:00 | 3 | 1 | 3 | 0 | 9 | 7 | 0 | 39 | 0 | 0 | 1 | 39 | 5 | 2 | 0 | 0 | 3 | 7 | 1 | 56 | 4 | 0 | 0 | 61 | 114 |
| 15:45:00 | 1 | 0 | 3 | 0 | 2 | 4 | 1 | 59 | 2 | 0 | 3 | 62 | 3 | 0 | 0 | 0 | 6 | 3 | 1 | 42 | 1 | 0 | 0 | 44 | 113 |
| **Grand Total** | 8 | 2 | 11 | 0 | 18 | 21 | 2 | 197 | 8 | 0 | 7 | 207 | 15 | 6 | 2 | 0 | 10 | 23 | 9 | 207 | 14 | 0 | 4 | 230 | **481** |
| **Approach%** | 38.1% | 9.5% | 52.4% | 0% | | - | 1% | 95.2% | 3.9% | 0% | | - | 65.2% | 26.1% | 8.7% | 0% | | - | 3.9% | 90% | 6.1% | 0% | | - | **-** |
| **Totals %** | 1.7% | 0.4% | 2.3% | 0% | | 4.4% | 0.4% | 41% | 1.7% | 0% | | 43% | 3.1% | 1.2% | 0.4% | 0% | | 4.8% | 1.9% | 43% | 2.9% | 0% | | 47.8% | **-** |
| **PHF** | 0.67 | 0.5 | 0.55 | 0 | | 0.75 | 0.5 | 0.83 | 0.67 | 0 | | 0.83 | 0.75 | 0.75 | 0.5 | 0 | | 0.72 | 0.32 | 0.88 | 0.7 | 0 | | 0.81 | **-** |
| **Heavy** | 0 | 0 | 0 | 0 | | 0 | 0 | 24 | 1 | 0 | | 25 | 1 | 0 | 1 | 0 | | 2 | 0 | 24 | 1 | 0 | | 25 | **-** |
| **Heavy %** | 0% | 0% | 0% | 0% | | 0% | 0% | 12.2% | 12.5% | 0% | | 12.1% | 6.7% | 0% | 50% | 0% | | 8.7% | 0% | 11.6% | 7.1% | 0% | | 10.9% | **-** |
| **Lights** | 8 | 2 | 11 | 0 | | 21 | 2 | 173 | 7 | 0 | | 182 | 14 | 6 | 1 | 0 | | 21 | 9 | 183 | 13 | 0 | | 205 | **-** |
| **Lights %** | 100% | 100% | 100% | 0% | | 100% | 100% | 87.8% | 87.5% | 0% | | 87.9% | 93.3% | 100% | 50% | 0% | | 91.3% | 100% | 88.4% | 92.9% | 0% | | 89.1% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 11 | 0 | 0 | | 11 | 1 | 0 | 0 | 0 | | 1 | 0 | 12 | 0 | 0 | | 12 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 5.6% | 0% | 0% | | 5.3% | 6.7% | 0% | 0% | 0% | | 4.3% | 0% | 5.8% | 0% | 0% | | 5.2% | **-** |
| **Buses** | 0 | 0 | 0 | 0 | | 0 | 0 | 5 | 1 | 0 | | 6 | 0 | 0 | 1 | 0 | | 1 | 0 | 3 | 1 | 0 | | 4 | **-** |
| **Buses %** | 0% | 0% | 0% | 0% | | 0% | 0% | 2.5% | 12.5% | 0% | | 2.9% | 0% | 0% | 50% | 0% | | 4.3% | 0% | 1.4% | 7.1% | 0% | | 1.7% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 8 | 0 | 0 | | 8 | 0 | 0 | 0 | 0 | | 0 | 0 | 9 | 0 | 0 | | 9 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 4.1% | 0% | 0% | | 3.9% | 0% | 0% | 0% | 0% | | 0% | 0% | 4.3% | 0% | 0% | | 3.9% | **-** |
| **Pedestrians** | - | - | - | - | 17 | - | - | - | - | - | 7 | - | - | - | - | - | 10 | - | - | - | - | - | 4 | - | **-** |
| **Pedestrians%** | - | - | - | - | 43.6% | | - | - | - | - | 17.9% | | - | - | - | - | 25.6% | | - | - | - | - | 10.3% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | - | 1 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | - | 2.6% | | - | - | - | - | 0% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:15 AM - 09:15 AM** **Weather: Overcast Clouds (16.73 °C)**


| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 1 | 6 |
| S | 0 | 4 |
| E | 0 | 0 |
| W | 0 | 3 |

Crozier & Associates
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COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:00 PM - 04:00 PM** **Weather: Overcast Clouds (12.76 °C)**


| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 1 | 17 |
| S | 0 | 10 |
| E | 0 | 7 |
| W | 0 | 4 |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

## Turning Movement Count (7 . MAIN ST & OWEN SOUND ST)

| Start Time | N Approach OWEN SOUND ST | | | | | E Approach MAIN ST | | | | | W Approach MAIN ST | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right N:W | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Thru E:W | UTurn E:E | Peds E: | Approach Total | Thru W:E | Left W:N | UTurn W:W | Peds W: | Approach Total | | |
| 06:00:00 | 0 | 5 | 0 | 0 | 5 | 3 | 17 | 0 | 0 | 20 | 39 | 0 | 0 | 0 | 39 | 64 | |
| 06:15:00 | 0 | 5 | 0 | 0 | 5 | 1 | 19 | 0 | 0 | 20 | 25 | 0 | 0 | 0 | 25 | 50 | |
| 06:30:00 | 0 | 1 | 0 | 0 | 1 | 3 | 29 | 0 | 0 | 32 | 41 | 0 | 0 | 0 | 41 | 74 | |
| 06:45:00 | 0 | 9 | 0 | 0 | 9 | 1 | 22 | 0 | 0 | 23 | 42 | 1 | 0 | 0 | 43 | 75 | 263 |
| 07:00:00 | 0 | 2 | 0 | 0 | 2 | 5 | 28 | 0 | 0 | 33 | 47 | 0 | 0 | 0 | 47 | 82 | 281 |
| 07:15:00 | 0 | 4 | 0 | 2 | 4 | 5 | 35 | 0 | 0 | 40 | 48 | 0 | 0 | 0 | 48 | 92 | 323 |
| 07:30:00 | 0 | 8 | 0 | 0 | 8 | 5 | 30 | 0 | 0 | 35 | 41 | 0 | 0 | 0 | 41 | 84 | 333 |
| 07:45:00 | 0 | 4 | 0 | 1 | 4 | 7 | 34 | 0 | 0 | 41 | 40 | 0 | 0 | 0 | 40 | 85 | 343 |
| 08:00:00 | 1 | 3 | 0 | 0 | 4 | 8 | 37 | 2 | 0 | 47 | 45 | 0 | 0 | 0 | 45 | 96 | 357 |
| 08:15:00 | 0 | 5 | 0 | 0 | 5 | 3 | 44 | 0 | 0 | 47 | 40 | 0 | 0 | 0 | 40 | 92 | 357 |
| 08:30:00 | 0 | 5 | 0 | 2 | 5 | 11 | 54 | 0 | 0 | 65 | 57 | 0 | 0 | 0 | 57 | 127 | 400 |
| 08:45:00 | 0 | 11 | 0 | 1 | 11 | 15 | 45 | 0 | 0 | 60 | 78 | 1 | 0 | 0 | 79 | 150 | 465 |
| 09:00:00 | 0 | 5 | 0 | 1 | 5 | 10 | 46 | 0 | 0 | 56 | 53 | 1 | 0 | 0 | 54 | 115 | 484 |
| 09:15:00 | 0 | 14 | 0 | 0 | 14 | 8 | 30 | 0 | 0 | 38 | 45 | 1 | 0 | 0 | 46 | 98 | 490 |
| 09:30:00 | 0 | 3 | 0 | 0 | 3 | 9 | 37 | 0 | 0 | 46 | 43 | 1 | 0 | 0 | 44 | 93 | 456 |
| 09:45:00 | 0 | 8 | 0 | 0 | 8 | 7 | 39 | 0 | 0 | 46 | 49 | 0 | 0 | 0 | 49 | 103 | 409 |
| ***BREAK*** | | | | | | | | | | | | | | | | | |
| 15:00:00 | 1 | 3 | 0 | 3 | 4 | 8 | 54 | 0 | 0 | 62 | 61 | 0 | 0 | 3 | 61 | 127 | |
| 15:15:00 | 0 | 16 | 0 | 5 | 16 | 24 | 54 | 0 | 0 | 78 | 64 | 0 | 0 | 0 | 64 | 158 | |
| 15:30:00 | 1 | 11 | 0 | 9 | 12 | 16 | 42 | 0 | 0 | 58 | 58 | 2 | 0 | 0 | 60 | 130 | |
| 15:45:00 | 1 | 7 | 0 | 8 | 8 | 14 | 55 | 0 | 0 | 69 | 52 | 0 | 0 | 0 | 52 | 129 | 544 |
| 16:00:00 | 1 | 8 | 0 | 0 | 9 | 22 | 50 | 0 | 0 | 72 | 55 | 1 | 0 | 0 | 56 | 137 | 554 |
| 16:15:00 | 1 | 9 | 0 | 4 | 10 | 16 | 64 | 0 | 0 | 80 | 45 | 3 | 0 | 0 | 48 | 138 | 534 |
| 16:30:00 | 0 | 9 | 0 | 1 | 9 | 13 | 55 | 0 | 0 | 68 | 45 | 0 | 0 | 0 | 45 | 122 | 526 |
| 16:45:00 | 0 | 10 | 0 | 5 | 10 | 10 | 54 | 0 | 0 | 64 | 52 | 0 | 0 | 0 | 52 | 126 | 523 |
| 17:00:00 | 0 | 9 | 0 | 9 | 9 | 24 | 56 | 0 | 0 | 80 | 56 | 3 | 0 | 0 | 59 | 148 | 534 |
| 17:15:00 | 0 | 10 | 0 | 2 | 10 | 20 | 56 | 0 | 0 | 76 | 50 | 3 | 0 | 0 | 53 | 139 | 535 |
| 17:30:00 | 0 | 14 | 0 | 1 | 14 | 12 | 39 | 0 | 0 | 51 | 51 | 1 | 0 | 0 | 52 | 117 | 530 |
| 17:45:00 | 2 | 6 | 0 | 2 | 8 | 17 | 51 | 0 | 0 | 68 | 33 | 3 | 0 | 0 | 36 | 112 | 516 |
| 18:00:00 | 4 | 11 | 0 | 1 | 15 | 19 | 29 | 0 | 0 | 48 | 32 | 3 | 0 | 0 | 35 | 98 | 466 |
| 18:15:00 | 2 | 7 | 0 | 0 | 9 | 23 | 26 | 0 | 0 | 49 | 40 | 3 | 0 | 0 | 43 | 101 | 428 |
| 18:30:00 | 0 | 7 | 0 | 4 | 7 | 19 | 42 | 0 | 0 | 61 | 31 | 0 | 0 | 0 | 31 | 99 | 410 |
| 18:45:00 | 0 | 11 | 0 | 2 | 11 | 20 | 33 | 0 | 0 | 53 | 40 | 7 | 0 | 2 | 47 | 111 | 409 |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Grand Total** | 14 | 240 | 0 | 63 | 254 | 378 | 1306 | 2 | 0 | 1686 | 1498 | 34 | 0 | 5 | 1532 | **3472** | - |
| **Approach%** | 5.5% | 94.5% | 0% | | - | 22.4% | 77.5% | 0.1% | | - | 97.8% | 2.2% | 0% | | - | **-** | - |
| **Totals %** | 0.4% | 6.9% | 0% | | 7.3% | 10.9% | 37.6% | 0.1% | | 48.6% | 43.1% | 1% | 0% | | 44.1% | **-** | - |
| **Heavy** | 0 | 2 | 0 | | - | 10 | 125 | 0 | | - | 135 | 0 | 0 | | - | **-** | - |
| **Heavy %** | 0% | 0.8% | 0% | | - | 2.6% | 9.6% | 0% | | - | 9% | 0% | 0% | | - | **-** | - |
| **Bicycles** | - | - | - | | - | - | - | - | | - | - | - | - | | - | **-** | - |
| **Bicycle %** | - | - | - | | - | - | - | - | | - | - | - | - | | - | **-** | - |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:30 AM - 09:30 AM Weather: Overcast Clouds (16.73 °C)**

| Start Time | N Approach OWEN SOUND ST | | | | | E Approach MAIN ST | | | | | W Approach MAIN ST | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Left | UTurn | Peds | Approach Total | Right | Thru | UTurn | Peds | Approach Total | Thru | Left | UTurn | Peds | Approach Total | |
| 08:30:00 | 0 | 5 | 0 | 2 | 5 | 11 | 54 | 0 | 0 | 65 | 57 | 0 | 0 | 0 | 57 | 127 |
| 08:45:00 | 0 | 11 | 0 | 1 | 11 | 15 | 45 | 0 | 0 | 60 | 78 | 1 | 0 | 0 | 79 | 150 |
| 09:00:00 | 0 | 5 | 0 | 1 | 5 | 10 | 46 | 0 | 0 | 56 | 53 | 1 | 0 | 0 | 54 | 115 |
| 09:15:00 | 0 | 14 | 0 | 0 | 14 | 8 | 30 | 0 | 0 | 38 | 45 | 1 | 0 | 0 | 46 | 98 |
| **Grand Total** | 0 | 35 | 0 | 4 | 35 | 44 | 175 | 0 | 0 | 219 | 233 | 3 | 0 | 0 | 236 | **490** |
| **Approach%** | 0% | 100% | 0% | | - | 20.1% | 79.9% | 0% | | - | 98.7% | 1.3% | 0% | | - | **-** |
| **Totals %** | 0% | 7.1% | 0% | | 7.1% | 9% | 35.7% | 0% | | 44.7% | 47.6% | 0.6% | 0% | | 48.2% | **-** |
| **PHF** | 0 | 0.63 | 0 | | 0.63 | 0.73 | 0.81 | 0 | | 0.84 | 0.75 | 0.75 | 0 | | 0.75 | **-** |
| **Heavy** | 0 | 0 | 0 | | 0 | 3 | 26 | 0 | | 29 | 30 | 0 | 0 | | 30 | **-** |
| **Heavy %** | 0% | 0% | 0% | | 0% | 6.8% | 14.9% | 0% | | 13.2% | 12.9% | 0% | 0% | | 12.7% | **-** |
| **Lights** | 0 | 35 | 0 | | 35 | 41 | 149 | 0 | | 190 | 203 | 3 | 0 | | 206 | **-** |
| **Lights %** | 0% | 100% | 0% | | 100% | 93.2% | 85.1% | 0% | | 86.8% | 87.1% | 100% | 0% | | 87.3% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | | 0 | 1 | 10 | 0 | | 11 | 16 | 0 | 0 | | 16 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | | 0% | 2.3% | 5.7% | 0% | | 5% | 6.9% | 0% | 0% | | 6.8% | **-** |
| **Buses** | 0 | 0 | 0 | | 0 | 2 | 4 | 0 | | 6 | 8 | 0 | 0 | | 8 | **-** |
| **Buses %** | 0% | 0% | 0% | | 0% | 4.5% | 2.3% | 0% | | 2.7% | 3.4% | 0% | 0% | | 3.4% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | | 0 | 0 | 12 | 0 | | 12 | 6 | 0 | 0 | | 6 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | | 0% | 0% | 6.9% | 0% | | 5.5% | 2.6% | 0% | 0% | | 2.5% | **-** |
| **Pedestrians** | - | - | - | 3 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | 75% | | - | - | - | 0% | | - | - | - | 0% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | 1 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | 25% | | - | - | - | 0% | | - | - | - | 0% | | **-** |

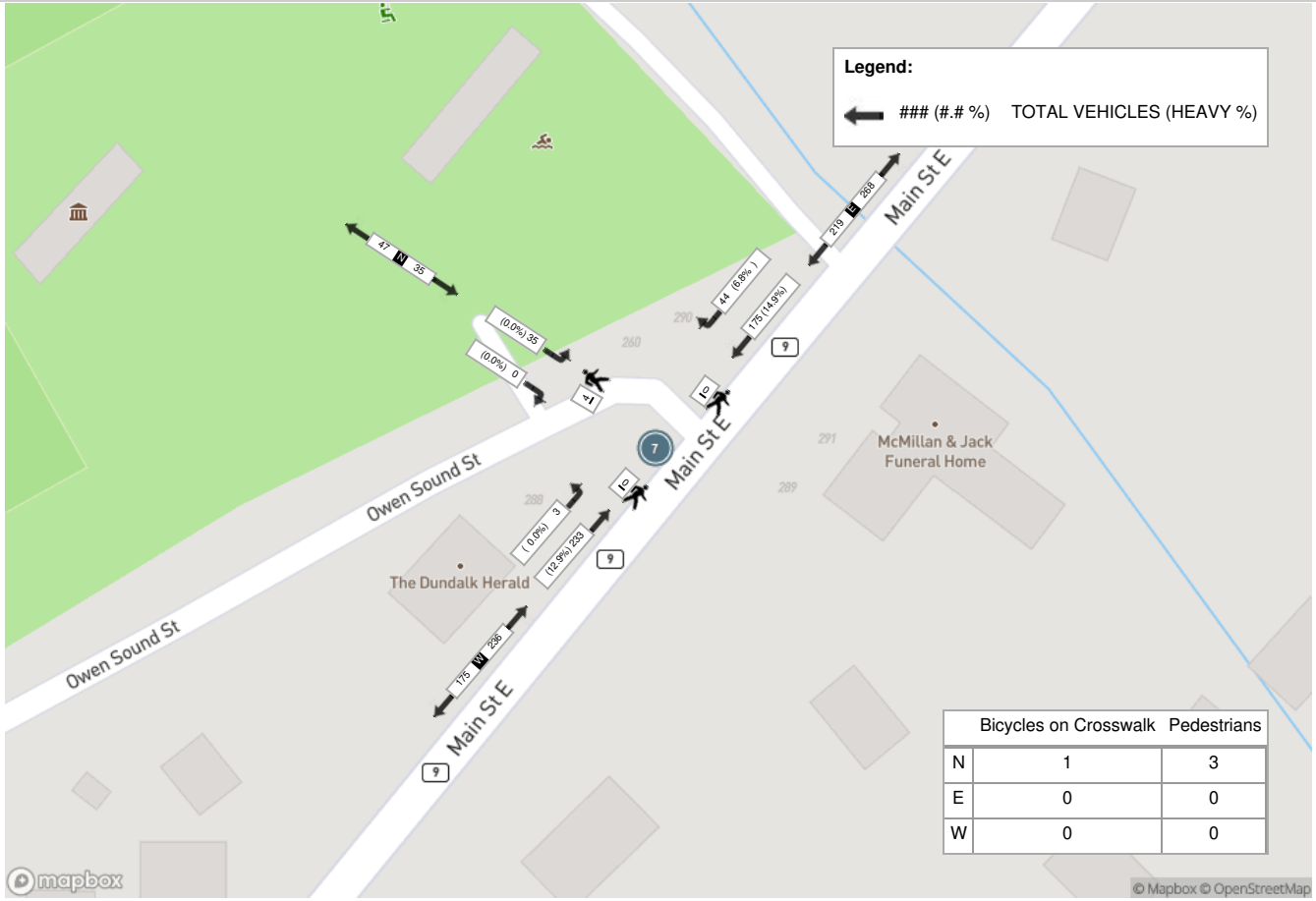
Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:15 PM - 04:15 PM Weather: Overcast Clouds (12.76 °C)**

| Start Time | N Approach OWEN SOUND ST | | | | | E Approach MAIN ST | | | | | W Approach MAIN ST | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Left | UTurn | Peds | Approach Total | Right | Thru | UTurn | Peds | Approach Total | Thru | Left | UTurn | Peds | Approach Total | |
| 15:15:00 | 0 | 16 | 0 | 5 | 16 | 24 | 54 | 0 | 0 | 78 | 64 | 0 | 0 | 0 | 64 | 158 |
| 15:30:00 | 1 | 11 | 0 | 9 | 12 | 16 | 42 | 0 | 0 | 58 | 58 | 2 | 0 | 0 | 60 | 130 |
| 15:45:00 | 1 | 7 | 0 | 8 | 8 | 14 | 55 | 0 | 0 | 69 | 52 | 0 | 0 | 0 | 52 | 129 |
| 16:00:00 | 1 | 8 | 0 | 0 | 9 | 22 | 50 | 0 | 0 | 72 | 55 | 1 | 0 | 0 | 56 | 137 |
| **Grand Total** | 3 | 42 | 0 | 22 | 45 | 76 | 201 | 0 | 0 | 277 | 229 | 3 | 0 | 0 | 232 | **554** |
| **Approach%** | 6.7% | 93.3% | 0% | | - | 27.4% | 72.6% | 0% | | - | 98.7% | 1.3% | 0% | | - | **-** |
| **Totals %** | 0.5% | 7.6% | 0% | | 8.1% | 13.7% | 36.3% | 0% | | 50% | 41.3% | 0.5% | 0% | | 41.9% | **-** |
| **PHF** | 0.75 | 0.66 | 0 | | 0.7 | 0.79 | 0.91 | 0 | | 0.89 | 0.89 | 0.38 | 0 | | 0.91 | **-** |
| **Heavy** | 0 | 0 | 0 | | 0 | 3 | 20 | 0 | | 23 | 21 | 0 | 0 | | 21 | **-** |
| **Heavy %** | 0% | 0% | 0% | | 0% | 3.9% | 10% | 0% | | 8.3% | 9.2% | 0% | 0% | | 9.1% | **-** |
| **Lights** | 3 | 42 | 0 | | 45 | 73 | 181 | 0 | | 254 | 208 | 3 | 0 | | 211 | **-** |
| **Lights %** | 100% | 100% | 0% | | 100% | 96.1% | 90% | 0% | | 91.7% | 90.8% | 100% | 0% | | 90.9% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | | 0 | 0 | 9 | 0 | | 9 | 8 | 0 | 0 | | 8 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | | 0% | 0% | 4.5% | 0% | | 3.2% | 3.5% | 0% | 0% | | 3.4% | **-** |
| **Buses** | 0 | 0 | 0 | | 0 | 3 | 4 | 0 | | 7 | 4 | 0 | 0 | | 4 | **-** |
| **Buses %** | 0% | 0% | 0% | | 0% | 3.9% | 2% | 0% | | 2.5% | 1.7% | 0% | 0% | | 1.7% | **-** |
| **Articulated Trucks** | 0 | 0 | 0 | | 0 | 0 | 7 | 0 | | 7 | 9 | 0 | 0 | | 9 | **-** |
| **Articulated Trucks %** | 0% | 0% | 0% | | 0% | 0% | 3.5% | 0% | | 2.5% | 3.9% | 0% | 0% | | 3.9% | **-** |
| **Pedestrians** | - | - | - | 22 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | 100% | | - | - | - | 0% | | - | - | - | 0% | | **-** |
| **Bicycles on Crosswalk** | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - | **-** |
| **Bicycles on Crosswalk%** | - | - | - | 0% | | - | - | - | 0% | | - | - | - | 0% | | **-** |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

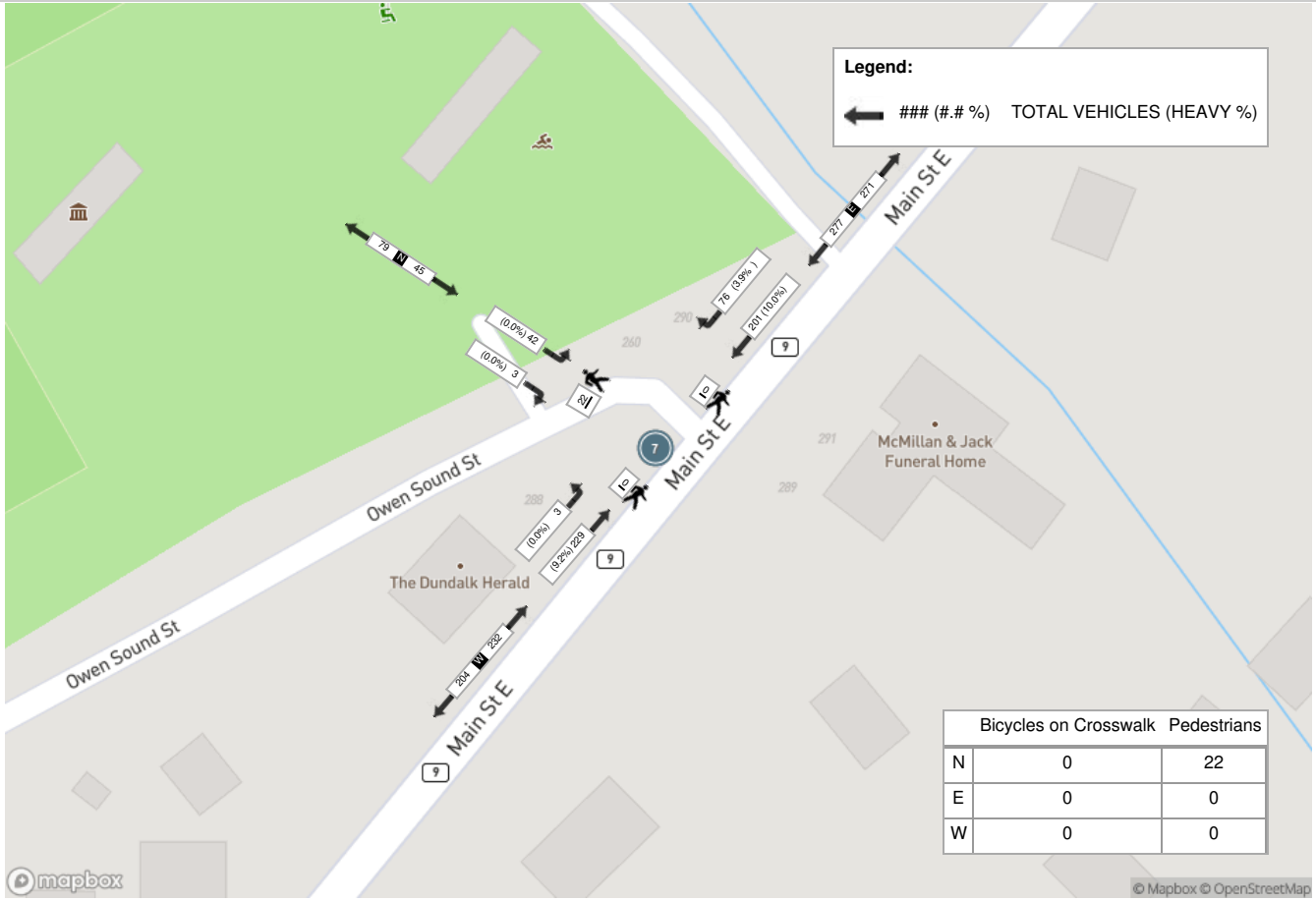
**Peak Hour: 08:30 AM - 09:30 AM Weather: Overcast Clouds (16.73 °C)**




| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 1 | 3 |
| E | 0 | 0 |
| W | 0 | 0 |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:15 PM - 04:15 PM Weather: Overcast Clouds (12.76 °C)**




| | Bicycles on Crosswalk | Pedestrians |
|---|---|---|
| N | 0 | 22 |
| E | 0 | 0 |
| W | 0 | 0 |

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

## Turning Movement Count (6 . TORONTO ST & OSPREY ST)

| Start Time | N Approach OSPREY ST | | | | | | E Approach TORONTO ST | | | | | | S Approach OSPREY ST | | | | | | W Approach TORONTO ST | | | | | | Int. Total (15 min) | Int. Total (1 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right N:W | Thru N:S | Left N:E | UTurn N:N | Peds N: | Approach Total | Right E:N | Thru E:W | Left E:S | UTurn E:E | Peds E: | Approach Total | Right S:E | Thru S:N | Left S:W | UTurn S:S | Peds S: | Approach Total | Right W:S | Thru W:E | Left W:N | UTurn W:W | Peds W: | Approach Total | | |
| 06:00:00 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 4 | 1 | 1 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 11 | |
| 06:15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 06:30:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 9 | |
| 06:45:00 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 9 | 31 |
| 07:00:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 5 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 30 |
| 07:15:00 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 39 |
| 07:30:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 37 |
| 07:45:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 3 | 3 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 12 | 40 |
| 08:00:00 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 2 | 6 | 0 | 0 | 9 | 2 | 2 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 1 | 2 | 17 | 47 |
| 08:15:00 | 1 | 2 | 0 | 0 | 4 | 3 | 0 | 1 | 4 | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 1 | 11 | 47 |
| 08:30:00 | 1 | 3 | 0 | 0 | 0 | 4 | 1 | 1 | 5 | 0 | 3 | 7 | 1 | 1 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 13 | 53 |
| 08:45:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 5 | 0 | 0 | 7 | 7 | 6 | 2 | 0 | 0 | 15 | 0 | 1 | 1 | 0 | 0 | 2 | 26 | 67 |
| 09:00:00 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 6 | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 60 |
| 09:15:00 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 6 | 0 | 0 | 6 | 7 | 2 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 1 | 19 | 68 |
| 09:30:00 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 3 | 2 | 1 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 11 | 66 |
| 09:45:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 4 | 4 | 2 | 1 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 53 |
| ***BREAK*** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15:00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 2 | 8 | |
| 15:15:00 | 0 | 3 | 0 | 0 | 3 | 3 | 0 | 2 | 7 | 0 | 5 | 9 | 12 | 4 | 4 | 0 | 0 | 20 | 0 | 1 | 0 | 0 | 0 | 1 | 33 | |
| 15:30:00 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 5 | 0 | 4 | 5 | 10 | 4 | 0 | 0 | 0 | 14 | 1 | 1 | 0 | 0 | 0 | 2 | 21 | |
| 15:45:00 | 0 | 3 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 2 | 5 | 7 | 3 | 0 | 0 | 0 | 10 | 0 | 2 | 0 | 0 | 0 | 2 | 20 | 82 |
| 16:00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 4 | 10 | 3 | 1 | 0 | 0 | 14 | 0 | 1 | 0 | 0 | 0 | 1 | 19 | 93 |
| 16:15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 9 | 4 | 1 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 0 | 1 | 20 | 80 |
| 16:30:00 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 4 | 3 | 4 | 1 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 1 | 11 | 70 |
| 16:45:00 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 1 | 5 | 0 | 0 | 6 | 6 | 5 | 1 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 71 |
| 17:00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 4 | 4 | 3 | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 1 | 0 | 14 | 66 |
| 17:15:00 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 6 | 0 | 1 | 7 | 4 | 5 | 1 | 0 | 0 | 10 | 1 | 4 | 0 | 0 | 0 | 5 | 25 | 71 |
| 17:30:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 3 | 4 | 0 | 2 | 0 | 1 | 6 | 0 | 1 | 0 | 0 | 1 | 1 | 12 | 72 |
| 17:45:00 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 4 | 11 | 2 | 0 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 70 |
| 18:00:00 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 1 | 2 | 0 | 0 | 3 | 6 | 2 | 1 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 1 | 15 | 71 |
| 18:15:00 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 1 | 4 | 5 | 5 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 63 |
| 18:30:00 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 9 | 0 | 1 | 9 | 4 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 66 |
| 18:45:00 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 7 | 2 | 1 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 62 |
| **Grand Total** | 3 | 54 | 0 | 0 | 15 | 57 | 3 | 20 | 132 | 0 | 23 | 155 | 142 | 71 | 20 | 2 | 6 | 235 | 12 | 16 | 1 | 0 | 10 | 29 | **476** | - |
| **Approach%** | 5.3% | 94.7% | 0% | 0% | | - | 1.9% | 12.9% | 85.2% | 0% | | - | 60.4% | 30.2% | 8.5% | 0.9% | | - | 41.4% | 55.2% | 3.4% | 0% | | - | - | - |
| **Totals %** | 0.6% | 11.3% | 0% | 0% | | 12% | 0.6% | 4.2% | 27.7% | 0% | | 32.6% | 29.8% | 14.9% | 4.2% | 0.4% | | 49.4% | 2.5% | 3.4% | 0.2% | 0% | | 6.1% | - | - |
| **Heavy** | 1 | 1 | 0 | 0 | | - | 0 | 0 | 0 | 0 | | - | 1 | 2 | 1 | 0 | | - | 0 | 0 | 0 | 0 | | - | - | - |
| **Heavy %** | 33.3% | 1.9% | 0% | 0% | | - | 0% | 0% | 0% | 0% | | - | 0.7% | 2.8% | 5% | 0% | | - | 0% | 0% | 0% | 0% | | - | - | - |
| **Bicycles** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - |
| **Bicycle %** | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - | | - | - | - |

Spectrum

Turning Movement Count
Location Name: TORONTO ST & OSPREY ST
Date: Tue, Jun 07, 2022 Deployment Lead: Tasos Issaaakidis

Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 08:30 AM - 09:30 AM Weather: Overcast Clouds (16.73 °C)**

| Start Time | N Approach OSPREY ST | | | | | | E Approach TORONTO ST | | | | | | S Approach OSPREY ST | | | | | | W Approach TORONTO ST | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 08:30:00 | 1 | 3 | 0 | 0 | 0 | 4 | 1 | 1 | 5 | 0 | 3 | 7 | 1 | 1 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 13 |
| 08:45:00 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 5 | 0 | 0 | 7 | 7 | 6 | 2 | 0 | 0 | 15 | 0 | 1 | 1 | 0 | 0 | 2 | 26 |
| 09:00:00 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 6 | 0 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 09:15:00 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 6 | 0 | 0 | 6 | 7 | 2 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 1 | 19 |
| **Grand Total** | 1 | 9 | 0 | 0 | 0 | 10 | 1 | 4 | 22 | 0 | 3 | 27 | 16 | 10 | 2 | 0 | 3 | 28 | 1 | 1 | 1 | 0 | 3 | 3 | **68** |
| **Approach%** | 10% | 90% | 0% | 0% | | - | 3.7% | 14.8% | 81.5% | 0% | | - | 57.1% | 35.7% | 7.1% | 0% | | - | 33.3% | 33.3% | 33.3% | 0% | | - | **-** |
| **Totals %** | 1.5% | 13.2% | 0% | 0% | | 14.7% | 1.5% | 5.9% | 32.4% | 0% | | 39.7% | 23.5% | 14.7% | 2.9% | 0% | | 41.2% | 1.5% | 1.5% | 1.5% | 0% | | 4.4% | **-** |
| **PHF** | 0.25 | 0.75 | 0 | 0 | | 0.63 | 0.25 | 0.5 | 0.92 | 0 | | 0.96 | 0.57 | 0.42 | 0.25 | 0 | | 0.47 | 0.25 | 0.25 | 0.25 | 0 | | 0.38 | **-** |
| **Heavy** | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Heavy %** | 0% | 11.1% | 0% | 0% | | 10% | 0% | 0% | 0% | 0% | | 0% | 0% | 10% | 0% | 0% | | 3.6% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Lights** | 1 | 8 | 0 | 0 | | 9 | 1 | 4 | 22 | 0 | | 27 | 16 | 9 | 2 | 0 | | 27 | 1 | 1 | 1 | 0 | | 3 | **-** |
| **Lights %** | 100% | 88.9% | 0% | 0% | | 90% | 100% | 100% | 100% | 0% | | 100% | 100% | 90% | 100% | 0% | | 96.4% | 100% | 100% | 100% | 0% | | 100% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Buses** | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Buses %** | 0% | 11.1% | 0% | 0% | | 10% | 0% | 0% | 0% | 0% | | 0% | 0% | 10% | 0% | 0% | | 3.6% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Bicycles on Road** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Bicycles on Road %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | - | 0 | - | - | - | - | - | 3 | - | - | - | - | - | 3 | - | - | - | - | - | 3 | - | **-** |
| **Pedestrians%** | - | - | - | - | 0% | | - | - | - | - | 33.3% | | - | - | - | - | 33.3% | | - | - | - | - | 33.3% | | **-** |

Crozier & Associates
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COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:15 PM - 04:15 PM Weather: Overcast Clouds (12.76 °C)**

| Start Time | N Approach OSPREY ST | | | | | | E Approach TORONTO ST | | | | | | S Approach OSPREY ST | | | | | | W Approach TORONTO ST | | | | | | Int. Total (15 min) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | Right | Thru | Left | UTurn | Peds | Approach Total | |
| 15:15:00 | 0 | 3 | 0 | 0 | 3 | 3 | 0 | 2 | 7 | 0 | 5 | 9 | 12 | 4 | 4 | 0 | 0 | 20 | 0 | 1 | 0 | 0 | 0 | 1 | 33 |
| 15:30:00 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 5 | 0 | 4 | 5 | 10 | 4 | 0 | 0 | 0 | 14 | 1 | 1 | 0 | 0 | 0 | 2 | 21 |
| 15:45:00 | 0 | 3 | 0 | 0 | 0 | 3 | 1 | 0 | 4 | 0 | 2 | 5 | 7 | 3 | 0 | 0 | 0 | 10 | 0 | 2 | 0 | 0 | 0 | 2 | 20 |
| 16:00:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 4 | 10 | 3 | 1 | 0 | 0 | 14 | 0 | 1 | 0 | 0 | 0 | 1 | 19 |
| **Grand Total** | 0 | 6 | 0 | 0 | 6 | 6 | 1 | 4 | 18 | 0 | 11 | 23 | 39 | 14 | 5 | 0 | 0 | 58 | 1 | 5 | 0 | 0 | 0 | 6 | **93** |
| **Approach%** | 0% | 100% | 0% | 0% | | - | 4.3% | 17.4% | 78.3% | 0% | | - | 67.2% | 24.1% | 8.6% | 0% | | - | 16.7% | 83.3% | 0% | 0% | | - | **-** |
| **Totals %** | 0% | 6.5% | 0% | 0% | | 6.5% | 1.1% | 4.3% | 19.4% | 0% | | 24.7% | 41.9% | 15.1% | 5.4% | 0% | | 62.4% | 1.1% | 5.4% | 0% | 0% | | 6.5% | **-** |
| **PHF** | 0 | 0.5 | 0 | 0 | | 0.5 | 0.25 | 0.5 | 0.64 | 0 | | 0.64 | 0.81 | 0.88 | 0.31 | 0 | | 0.73 | 0.25 | 0.63 | 0 | 0 | | 0.75 | **-** |
| **Heavy** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | 1 | 0 | | 2 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Heavy %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 7.1% | 20% | 0% | | 3.4% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Lights** | 0 | 6 | 0 | 0 | | 6 | 1 | 4 | 18 | 0 | | 23 | 39 | 13 | 4 | 0 | | 56 | 1 | 5 | 0 | 0 | | 6 | **-** |
| **Lights %** | 0% | 100% | 0% | 0% | | 100% | 100% | 100% | 100% | 0% | | 100% | 100% | 92.9% | 80% | 0% | | 96.6% | 100% | 100% | 0% | 0% | | 100% | **-** |
| **Single-Unit Trucks** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Single-Unit Trucks %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Buses** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | 1 | 0 | | 2 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Buses %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 7.1% | 20% | 0% | | 3.4% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Bicycles on Road** | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | **-** |
| **Bicycles on Road %** | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | 0% | 0% | 0% | 0% | | 0% | **-** |
| **Pedestrians** | - | - | - | - | 6 | - | - | - | - | - | 11 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | **-** |
| **Pedestrians%** | - | - | - | - | 35.3% | | - | - | - | - | 64.7% | | - | - | - | - | 0% | | - | - | - | - | 0% | | **-** |

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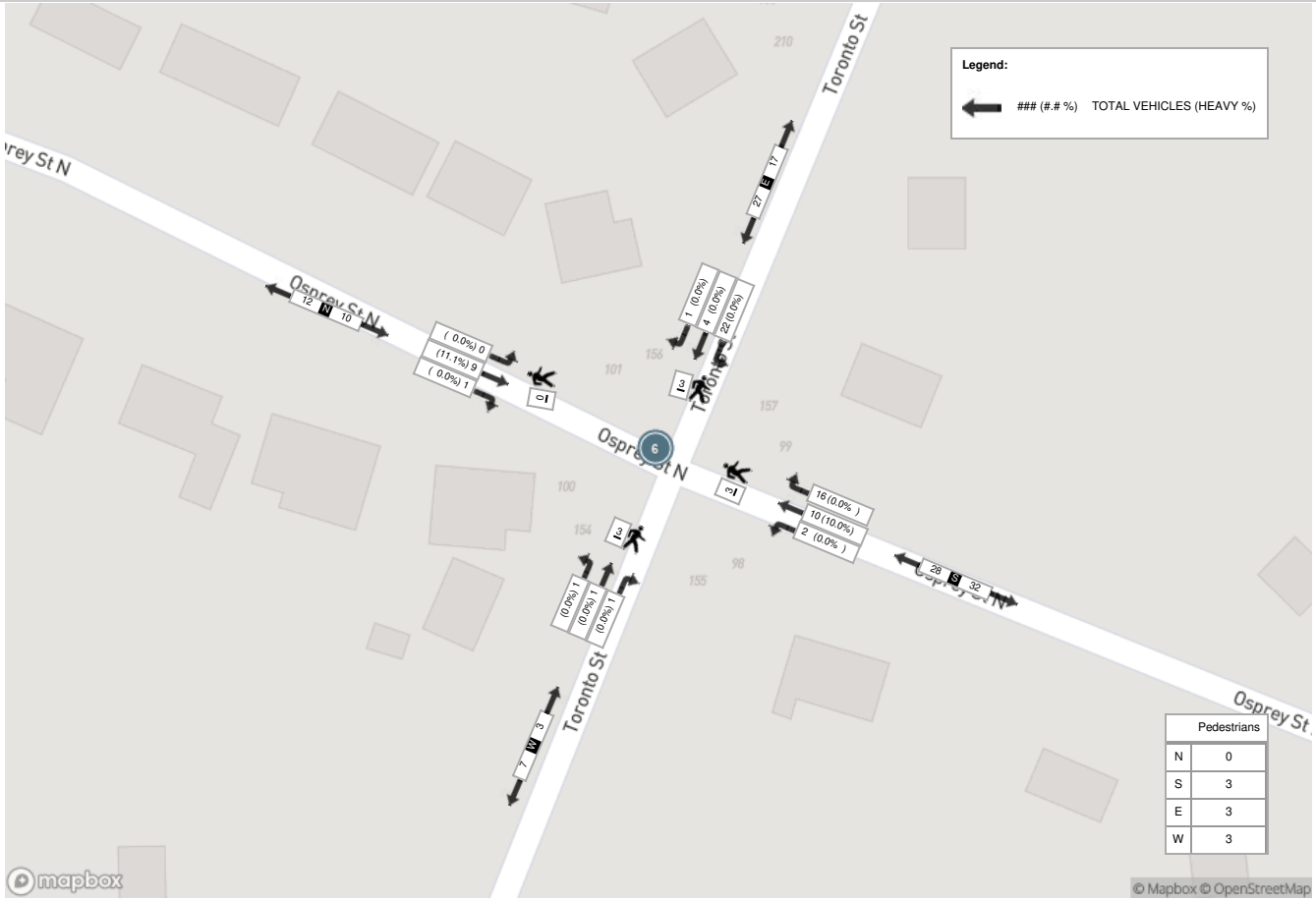
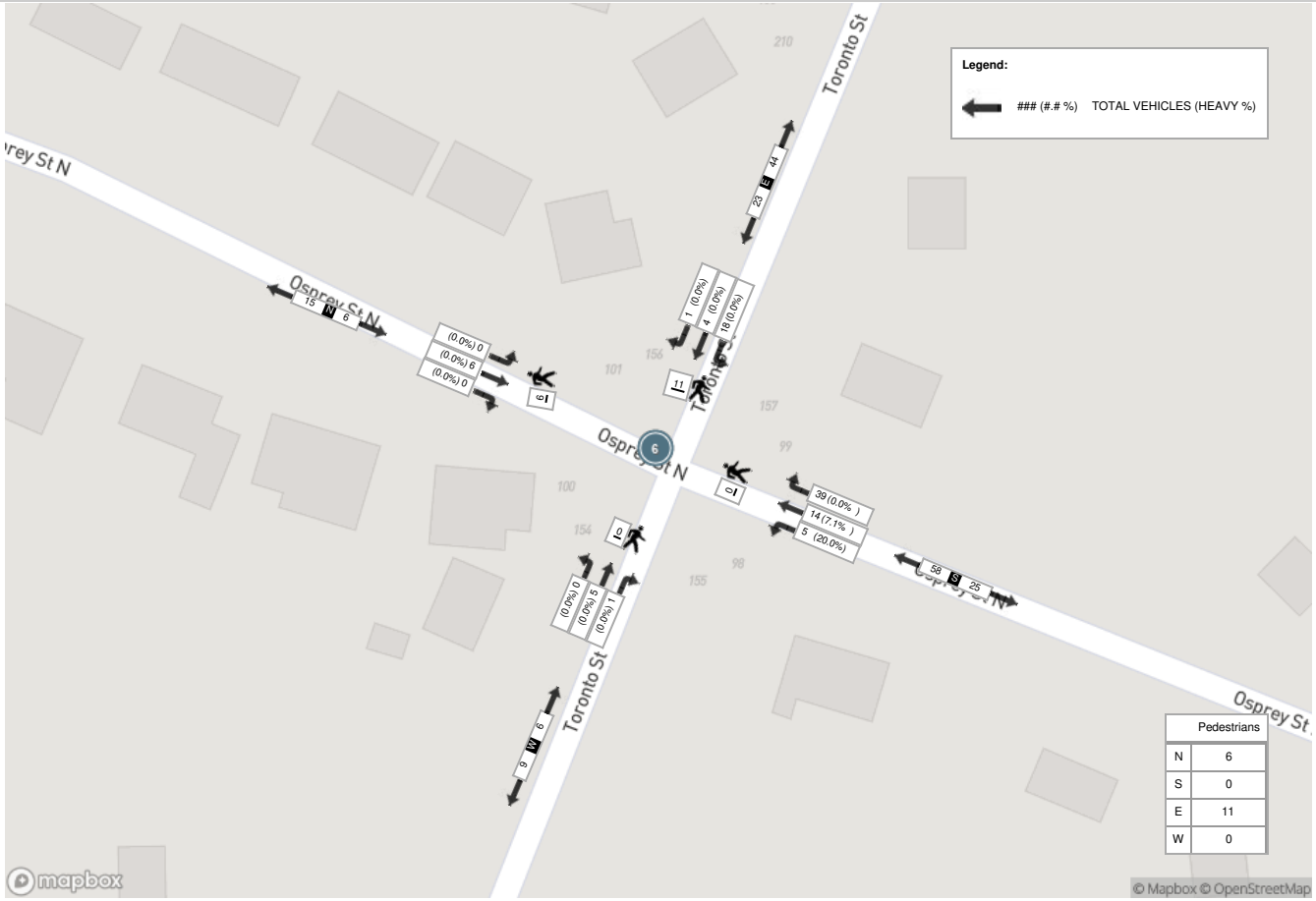
CANADA

**Peak Hour: 08:30 AM - 09:30 AM** **Weather: Overcast Clouds (16.73 °C)**



Crozier & Associates
SUITE 301 40 HURON STREET
COLLINGWOOD ONTARIO, L9Y 4R3
CANADA

**Peak Hour: 03:15 PM - 04:15 PM Weather: Overcast Clouds (12.76 °C)**



# APPENDIX C

## Level of Service Definitions

## Level of Service Definitions

### Two-Way Stop Controlled Intersections

| Level of Service | Control Delay per Vehicle (seconds) | Interpretation |
|---|---|---|
| A | ≤ 10 | EXCELLENT. Large and frequent gaps in traffic on the main roadway. Queuing on the minor street is rare. |
| B | > 10 and ≤ 15 | VERY GOOD. Many gaps exist in traffic on the main roadway. Queuing on the minor street is minimal. |
| C | > 15 and ≤ 25 | GOOD. Fewer gaps exist in traffic on the main roadway. Delay on minor approach becomes more noticeable. |
| D | > 25 and ≤ 35 | FAIR. Infrequent and shorter gaps in traffic on the main roadway. Queue lengths develop on the minor street. |
| E | > 35 and ≤ 50 | POOR. Very infrequent gaps in traffic on the main roadway. Queue lengths become noticeable. |
| F | > 50 | UNSATISFACTORY. Very few gaps in traffic on the main roadway. Excessive delay with significant queue lengths on the minor street. |

Adapted from Highway Capacity Manual 2000, Transportation Research Board

# APPENDIX D

## Detailed Capacity Analysis

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 6 | 9 | 9 | 7 | 16 |
| Future Volume (Veh/h) | 5 | 6 | 9 | 9 | 7 | 16 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 7 | 8 | 12 | 12 | 9 | 21 |
| 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 | 57 | 18 | | | 24 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 57 | 18 | | | 24 | |
| tC, single (s) | 6.4 | 6.5 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.6 | | | 2.3 | |
| p0 queue free % | 99 | 99 | | | 99 | |
| cM capacity (veh/h) | 950 | 977 | | | 1516 | |

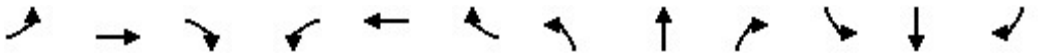
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 15 | 24 | 30 |
| Volume Left | 7 | 0 | 9 |
| Volume Right | 8 | 12 | 0 |
| cSH | 964 | 1700 | 1516 |
| Volume to Capacity | 0.02 | 0.01 | 0.01 |
| Queue Length 95th (m) | 0.4 | 0.0 | 0.1 |
| Control Delay (s) | 8.8 | 0.0 | 2.2 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 2.2 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.9 | | |
| Intersection Capacity Utilization | 17.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 4 | 17 | 9 | 2 | 10 |
| Future Volume (Veh/h) | 0 | 4 | 17 | 9 | 2 | 10 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Hourly flow rate (vph) | 0 | 5 | 23 | 12 | 3 | 13 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 5 | | 60 | 2 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 5 | | 60 | 2 |
| tC, single (s) | | | 4.1 | | 6.9 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 4.0 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 99 |
| cM capacity (veh/h) | | | 1630 | | 827 | 1087 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 5 | 35 | 16 |
| Volume Left | 0 | 23 | 3 |
| Volume Right | 5 | 0 | 13 |
| cSH | 1700 | 1630 | 1027 |
| Volume to Capacity | 0.00 | 0.01 | 0.02 |
| Queue Length 95th (m) | 0.0 | 0.3 | 0.4 |
| Control Delay (s) | 0.0 | 4.8 | 8.6 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 4.8 | 8.6 |
| Approach LOS | | | A |

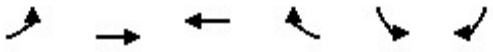
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.4 | | |
| Intersection Capacity Utilization | 18.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 5 | 114 | 17 | 36 | 64 | 10 | 11 | 2 | 24 | 12 | 11 | 3 |
| Future Volume (Veh/h) | 5 | 114 | 17 | 36 | 64 | 10 | 11 | 2 | 24 | 12 | 11 | 3 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 6 | 139 | 21 | 44 | 78 | 12 | 13 | 2 | 29 | 15 | 13 | 4 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 90 | | | 160 | | | 345 | 340 | 152 | 366 | 344 | 85 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 90 | | | 160 | | | 345 | 340 | 152 | 366 | 344 | 85 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 100 | | | 96 | | | 98 | 100 | 97 | 97 | 98 | 100 |
| cM capacity (veh/h) | 1399 | | | 1161 | | | 564 | 561 | 836 | 539 | 544 | 978 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 166 | 134 | 44 | 32 |
| Volume Left | 6 | 44 | 13 | 15 |
| Volume Right | 21 | 12 | 29 | 4 |
| cSH | 1399 | 1161 | 717 | 573 |
| Volume to Capacity | 0.00 | 0.04 | 0.06 | 0.06 |
| Queue Length 95th (m) | 0.1 | 0.9 | 1.5 | 1.3 |
| Control Delay (s) | 0.3 | 2.9 | 10.3 | 11.7 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.3 | 2.9 | 10.3 | 11.7 |
| Approach LOS | | | B | B |

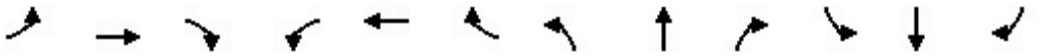
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 27.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 228 | 166 | 20 | 11 | 33 |
| Future Volume (Veh/h) | 20 | 228 | 166 | 20 | 11 | 33 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 28 | 317 | 231 | 28 | 15 | 46 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 269 | | | | 629 | 256 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 269 | | | | 629 | 256 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 98 | | | | 96 | 94 |
| cM capacity (veh/h) | 1235 | | | | 407 | 770 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 345 | 259 | 61 |
| Volume Left | 28 | 0 | 15 |
| Volume Right | 0 | 28 | 46 |
| cSH | 1235 | 1700 | 631 |
| Volume to Capacity | 0.02 | 0.15 | 0.10 |
| Queue Length 95th (m) | 0.5 | 0.0 | 2.4 |
| Control Delay (s) | 0.9 | 0.0 | 11.3 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.9 | 0.0 | 11.3 |
| Approach LOS | | | B |

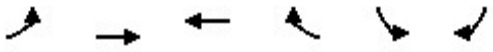
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 37.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 10 | 211 | 12 | 7 | 180 | 2 | 12 | 1 | 11 | 13 | 4 | 10 |
| Future Volume (Veh/h) | 10 | 211 | 12 | 7 | 180 | 2 | 12 | 1 | 11 | 13 | 4 | 10 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 13 | 274 | 16 | 9 | 234 | 3 | 16 | 1 | 14 | 17 | 5 | 13 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 244 | | | 296 | | | 586 | 576 | 288 | 583 | 582 | 246 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 244 | | | 296 | | | 586 | 576 | 288 | 583 | 582 | 246 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 96 | 100 | 98 | 96 | 99 | 98 |
| cM capacity (veh/h) | 1326 | | | 1270 | | | 391 | 419 | 711 | 395 | 415 | 791 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 303 | 246 | 31 | 35 |
| Volume Left | 13 | 9 | 16 | 17 |
| Volume Right | 16 | 3 | 14 | 13 |
| cSH | 1326 | 1270 | 492 | 489 |
| Volume to Capacity | 0.01 | 0.01 | 0.06 | 0.07 |
| Queue Length 95th (m) | 0.2 | 0.2 | 1.5 | 1.7 |
| Control Delay (s) | 0.4 | 0.3 | 12.8 | 12.9 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.4 | 0.3 | 12.8 | 12.9 |
| Approach LOS | | | B | B |

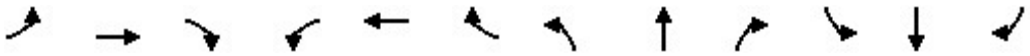
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.7 | | | |
| Intersection Capacity Utilization | 26.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



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

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 0 | 0 | 0 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 |
| cSH | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 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 |

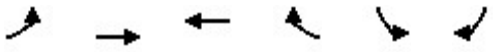
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 0.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 1 | 1 | 1 | 22 | 4 | 1 | 2 | 10 | 16 | 0 | 9 | 1 |
| Future Volume (vph) | 1 | 1 | 1 | 22 | 4 | 1 | 2 | 10 | 16 | 0 | 9 | 1 |
| Peak Hour Factor | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Hourly flow rate (vph) | 2 | 2 | 2 | 34 | 6 | 2 | 3 | 15 | 25 | 0 | 14 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 6 | 42 | 43 | 16 |
| Volume Left (vph) | 2 | 34 | 3 | 0 |
| Volume Right (vph) | 2 | 2 | 25 | 2 |
| Hadj (s) | -0.13 | 0.13 | -0.28 | 0.09 |
| Departure Headway (s) | 3.9 | 4.2 | 3.7 | 4.1 |
| Degree Utilization, x | 0.01 | 0.05 | 0.04 | 0.02 |
| Capacity (veh/h) | 895 | 849 | 936 | 855 |
| Control Delay (s) | 7.0 | 7.4 | 6.9 | 7.2 |
| Approach Delay (s) | 7.0 | 7.4 | 6.9 | 7.2 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | | 7.1 | | |
| Level of Service | | A | | |
| Intersection Capacity Utilization | | 15.4% | ICU Level of Service | A |
| Analysis Period (min) | | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 3 | 233 | 175 | 44 | 35 | 0 |
| Future Volume (Veh/h) | 3 | 233 | 175 | 44 | 35 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 4 | 284 | 213 | 54 | 43 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 271 | | | | 536 | 244 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 271 | | | | 536 | 244 |
| 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 | | | | 91 | 100 |
| cM capacity (veh/h) | 1298 | | | | 505 | 796 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 288 | 267 | 43 |
| Volume Left | 4 | 0 | 43 |
| Volume Right | 0 | 54 | 0 |
| cSH | 1298 | 1700 | 505 |
| Volume to Capacity | 0.00 | 0.16 | 0.09 |
| Queue Length 95th (m) | 0.1 | 0.0 | 2.1 |
| Control Delay (s) | 0.1 | 0.0 | 12.8 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.1 | 0.0 | 12.8 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 24.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 9 | 11 | 22 | 7 | 9 | 16 |
| Future Volume (Veh/h) | 9 | 11 | 22 | 7 | 9 | 16 |
| 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) | 11 | 14 | 28 | 9 | 11 | 20 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 74 | 32 | | | 37 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 74 | 32 | | | 37 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 99 | 99 | | | 99 | |
| cM capacity (veh/h) | 928 | 1047 | | | 1587 | |

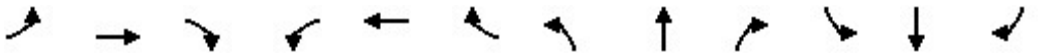
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 25 | 37 | 31 |
| Volume Left | 11 | 0 | 11 |
| Volume Right | 14 | 9 | 0 |
| cSH | 991 | 1700 | 1587 |
| Volume to Capacity | 0.03 | 0.02 | 0.01 |
| Queue Length 95th (m) | 0.6 | 0.0 | 0.2 |
| Control Delay (s) | 8.7 | 0.0 | 2.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.7 | 0.0 | 2.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.2 | | |
| 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) | 19 | 11 | 10 | 20 | 7 | 11 |
| Future Volume (Veh/h) | 19 | 11 | 10 | 20 | 7 | 11 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 21 | 12 | 11 | 22 | 8 | 12 |
| 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 | | | 33 | | 71 | 27 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 33 | | 71 | 27 |
| tC, single (s) | | | 4.1 | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.6 | 3.3 |
| p0 queue free % | | | 99 | | 99 | 99 |
| cM capacity (veh/h) | | | 1592 | | 898 | 1054 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 33 | 33 | 20 |
| Volume Left | 0 | 11 | 8 |
| Volume Right | 12 | 0 | 12 |
| cSH | 1700 | 1592 | 986 |
| Volume to Capacity | 0.02 | 0.01 | 0.02 |
| Queue Length 95th (m) | 0.0 | 0.2 | 0.5 |
| Control Delay (s) | 0.0 | 2.5 | 8.7 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 2.5 | 8.7 |
| Approach LOS | | | A |

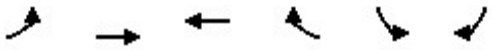
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.0 | | |
| Intersection Capacity Utilization | 18.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 7 | 103 | 14 | 32 | 133 | 9 | 22 | 14 | 38 | 9 | 8 | 8 |
| Future Volume (Veh/h) | 7 | 103 | 14 | 32 | 133 | 9 | 22 | 14 | 38 | 9 | 8 | 8 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 7 | 108 | 15 | 34 | 140 | 9 | 23 | 15 | 40 | 9 | 8 | 8 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 152 | | | 124 | | | 355 | 350 | 120 | 396 | 354 | 148 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 152 | | | 124 | | | 355 | 350 | 120 | 396 | 354 | 148 |
| tC, single (s) | 4.2 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 97 | | | 96 | 97 | 96 | 98 | 99 | 99 |
| cM capacity (veh/h) | 1354 | | | 1285 | | | 566 | 535 | 899 | 513 | 554 | 868 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 130 | 183 | 78 | 25 |
| Volume Left | 7 | 34 | 23 | 9 |
| Volume Right | 15 | 9 | 40 | 8 |
| cSH | 1354 | 1285 | 689 | 607 |
| Volume to Capacity | 0.01 | 0.03 | 0.11 | 0.04 |
| Queue Length 95th (m) | 0.1 | 0.6 | 2.9 | 1.0 |
| Control Delay (s) | 0.5 | 1.6 | 10.9 | 11.2 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.5 | 1.6 | 10.9 | 11.2 |
| Approach LOS | | | B | B |

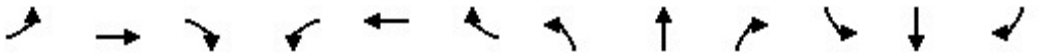
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.6 | | | |
| Intersection Capacity Utilization | 28.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 12 | 192 | 196 | 8 | 16 | 26 |
| Future Volume (Veh/h) | 12 | 192 | 196 | 8 | 16 | 26 |
| 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) | 13 | 202 | 206 | 8 | 17 | 27 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 220 | | | | 446 | 218 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 220 | | | | 446 | 218 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 99 | | | | 97 | 97 |
| cM capacity (veh/h) | 1351 | | | | 552 | 819 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 215 | 214 | 44 |
| Volume Left | 13 | 0 | 17 |
| Volume Right | 0 | 8 | 27 |
| cSH | 1351 | 1700 | 690 |
| Volume to Capacity | 0.01 | 0.13 | 0.06 |
| Queue Length 95th (m) | 0.2 | 0.0 | 1.5 |
| Control Delay (s) | 0.5 | 0.0 | 10.6 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.5 | 0.0 | 10.6 |
| Approach LOS | | | B |

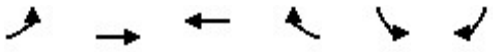
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.2 | | |
| Intersection Capacity Utilization | 30.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 207 | 9 | 8 | 197 | 2 | 2 | 6 | 15 | 11 | 2 | 8 |
| Future Volume (Veh/h) | 14 | 207 | 9 | 8 | 197 | 2 | 2 | 6 | 15 | 11 | 2 | 8 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 16 | 230 | 10 | 9 | 219 | 2 | 2 | 7 | 17 | 12 | 2 | 9 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 239 | | | 257 | | | 536 | 541 | 259 | 550 | 545 | 242 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 239 | | | 257 | | | 536 | 541 | 259 | 550 | 545 | 242 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 99 | 98 | 98 | 97 | 100 | 99 |
| cM capacity (veh/h) | 1278 | | | 1228 | | | 361 | 428 | 751 | 407 | 426 | 786 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 256 | 230 | 26 | 23 |
| Volume Left | 16 | 9 | 2 | 12 |
| Volume Right | 10 | 2 | 17 | 9 |
| cSH | 1278 | 1228 | 584 | 504 |
| Volume to Capacity | 0.01 | 0.01 | 0.04 | 0.05 |
| Queue Length 95th (m) | 0.3 | 0.2 | 1.1 | 1.1 |
| Control Delay (s) | 0.6 | 0.4 | 11.4 | 12.5 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.6 | 0.4 | 11.4 | 12.5 |
| Approach LOS | | | B | B |

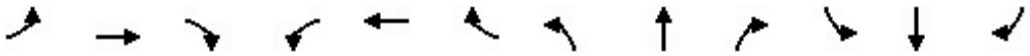
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.5 | | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



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

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 0 | 0 | 0 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 |
| cSH | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.00 | 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 |

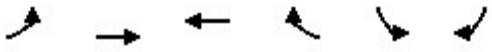
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 0.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 5 | 1 | 18 | 4 | 1 | 5 | 14 | 39 | 0 | 6 | 0 |
| Future Volume (vph) | 0 | 5 | 1 | 18 | 4 | 1 | 5 | 14 | 39 | 0 | 6 | 0 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 0 | 7 | 1 | 26 | 6 | 1 | 7 | 20 | 56 | 0 | 9 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 8 | 33 | 83 | 9 |
| Volume Left (vph) | 0 | 26 | 7 | 0 |
| Volume Right (vph) | 1 | 1 | 56 | 0 |
| Hadj (s) | -0.07 | 0.14 | -0.33 | 0.00 |
| Departure Headway (s) | 4.0 | 4.2 | 3.7 | 4.1 |
| Degree Utilization, x | 0.01 | 0.04 | 0.08 | 0.01 |
| Capacity (veh/h) | 864 | 829 | 958 | 869 |
| Control Delay (s) | 7.1 | 7.4 | 7.0 | 7.1 |
| Approach Delay (s) | 7.1 | 7.4 | 7.0 | 7.1 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 25.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 3 | 229 | 201 | 76 | 42 | 3 |
| Future Volume (Veh/h) | 3 | 229 | 201 | 76 | 42 | 3 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 3 | 260 | 228 | 86 | 48 | 3 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 336 | | | | 559 | 293 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 336 | | | | 559 | 293 |
| 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 | | | | 90 | 100 |
| cM capacity (veh/h) | 1202 | | | | 479 | 731 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 263 | 314 | 51 |
| Volume Left | 3 | 0 | 48 |
| Volume Right | 0 | 86 | 3 |
| cSH | 1202 | 1700 | 489 |
| Volume to Capacity | 0.00 | 0.18 | 0.10 |
| Queue Length 95th (m) | 0.1 | 0.0 | 2.6 |
| Control Delay (s) | 0.1 | 0.0 | 13.2 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.1 | 0.0 | 13.2 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.1 | | |
| Intersection Capacity Utilization | 25.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 23 | 27 | 10 | 16 | 14 | 18 |
| Future Volume (Veh/h) | 23 | 27 | 10 | 16 | 14 | 18 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 30 | 36 | 13 | 21 | 18 | 24 |
| 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 | 84 | 24 | | | 34 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 84 | 24 | | | 34 | |
| tC, single (s) | 6.4 | 6.5 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.6 | | | 2.3 | |
| p0 queue free % | 97 | 96 | | | 99 | |
| cM capacity (veh/h) | 912 | 970 | | | 1503 | |

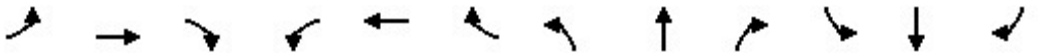
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 66 | 34 | 42 |
| Volume Left | 30 | 0 | 18 |
| Volume Right | 36 | 21 | 0 |
| cSH | 943 | 1700 | 1503 |
| Volume to Capacity | 0.07 | 0.02 | 0.01 |
| Queue Length 95th (m) | 1.7 | 0.0 | 0.3 |
| Control Delay (s) | 9.1 | 0.0 | 3.2 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.1 | 0.0 | 3.2 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 18.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 45 | 126 | 29 | 24 | 43 | 13 |
| Future Volume (Veh/h) | 45 | 126 | 29 | 24 | 43 | 13 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Hourly flow rate (vph) | 60 | 168 | 39 | 32 | 57 | 17 |
| 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 | | | 228 | | 254 | 144 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 228 | | 254 | 144 |
| tC, single (s) | | | 4.1 | | 6.9 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 4.0 | 3.3 |
| p0 queue free % | | | 97 | | 91 | 98 |
| cM capacity (veh/h) | | | 1352 | | 623 | 909 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 228 | 71 | 74 |
| Volume Left | 0 | 39 | 57 |
| Volume Right | 168 | 0 | 17 |
| cSH | 1700 | 1352 | 672 |
| Volume to Capacity | 0.13 | 0.03 | 0.11 |
| Queue Length 95th (m) | 0.0 | 0.7 | 2.8 |
| Control Delay (s) | 0.0 | 4.4 | 11.0 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 4.4 | 11.0 |
| Approach LOS | | | B |

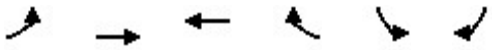
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.0 | | |
| Intersection Capacity Utilization | 26.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 157 | 19 | 39 | 140 | 11 | 12 | 3 | 26 | 13 | 12 | 21 |
| Future Volume (Veh/h) | 12 | 157 | 19 | 39 | 140 | 11 | 12 | 3 | 26 | 13 | 12 | 21 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 15 | 191 | 23 | 48 | 171 | 13 | 15 | 4 | 32 | 16 | 15 | 26 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 184 | | | 214 | | | 540 | 512 | 204 | 542 | 518 | 178 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 184 | | | 214 | | | 540 | 512 | 204 | 542 | 518 | 178 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 99 | | | 96 | | | 96 | 99 | 96 | 96 | 96 | 97 |
| cM capacity (veh/h) | 1290 | | | 1105 | | | 399 | 442 | 779 | 402 | 427 | 869 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 229 | 232 | 51 | 57 |
| Volume Left | 15 | 48 | 15 | 16 |
| Volume Right | 23 | 13 | 32 | 26 |
| cSH | 1290 | 1105 | 582 | 544 |
| Volume to Capacity | 0.01 | 0.04 | 0.09 | 0.10 |
| Queue Length 95th (m) | 0.3 | 1.0 | 2.2 | 2.7 |
| Control Delay (s) | 0.6 | 2.1 | 11.8 | 12.4 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.6 | 2.1 | 11.8 | 12.4 |
| Approach LOS | | | B | B |

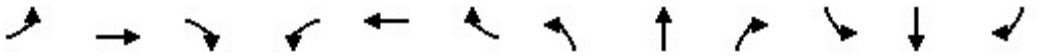
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.4 | | | |
| Intersection Capacity Utilization | 31.9% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 26 | 279 | 246 | 53 | 114 | 50 |
| Future Volume (Veh/h) | 26 | 279 | 246 | 53 | 114 | 50 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 36 | 388 | 342 | 74 | 158 | 69 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 426 | | | | 850 | 390 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 426 | | | | 850 | 390 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 97 | | | | 47 | 89 |
| cM capacity (veh/h) | 1079 | | | | 296 | 648 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 424 | 416 | 227 |
| Volume Left | 36 | 0 | 158 |
| Volume Right | 0 | 74 | 69 |
| cSH | 1079 | 1700 | 355 |
| Volume to Capacity | 0.03 | 0.24 | 0.64 |
| Queue Length 95th (m) | 0.8 | 0.0 | 32.0 |
| Control Delay (s) | 1.1 | 0.0 | 31.5 |
| Lane LOS | A | | D |
| Approach Delay (s) | 1.1 | 0.0 | 31.5 |
| Approach LOS | | | D |

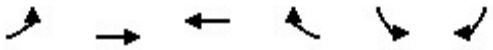
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.1 | | |
| Intersection Capacity Utilization | 52.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 351 | 24 | 8 | 263 | 3 | 42 | 2 | 12 | 16 | 5 | 12 |
| Future Volume (Veh/h) | 12 | 351 | 24 | 8 | 263 | 3 | 42 | 2 | 12 | 16 | 5 | 12 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 16 | 456 | 31 | 10 | 342 | 4 | 55 | 3 | 16 | 21 | 6 | 16 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 353 | | | 493 | | | 896 | 882 | 478 | 892 | 896 | 354 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 353 | | | 493 | | | 896 | 882 | 478 | 892 | 896 | 354 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 77 | 99 | 97 | 91 | 98 | 98 |
| cM capacity (veh/h) | 1209 | | | 1075 | | | 237 | 277 | 553 | 239 | 272 | 688 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 503 | 356 | 74 | 43 |
| Volume Left | 16 | 10 | 55 | 21 |
| Volume Right | 31 | 4 | 16 | 16 |
| cSH | 1209 | 1075 | 272 | 323 |
| Volume to Capacity | 0.01 | 0.01 | 0.27 | 0.13 |
| Queue Length 95th (m) | 0.3 | 0.2 | 8.2 | 3.5 |
| Control Delay (s) | 0.4 | 0.3 | 23.1 | 17.8 |
| Lane LOS | A | A | C | C |
| Approach Delay (s) | 0.4 | 0.3 | 23.1 | 17.8 |
| Approach LOS | | | C | C |

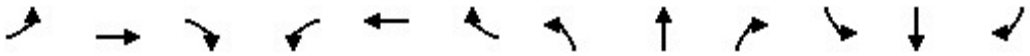
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.9 | | | |
| Intersection Capacity Utilization | 36.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 11 | 35 | 25 | 38 | 135 | 33 |
| Future Volume (Veh/h) | 11 | 35 | 25 | 38 | 135 | 33 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 12 | 38 | 27 | 41 | 147 | 36 |
| 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 | 68 | | | | 110 | 48 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 68 | | | | 110 | 48 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 83 | 96 |
| cM capacity (veh/h) | 1533 | | | | 881 | 1022 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 50 | 68 | 183 |
| Volume Left | 12 | 0 | 147 |
| Volume Right | 0 | 41 | 36 |
| cSH | 1533 | 1700 | 905 |
| Volume to Capacity | 0.01 | 0.04 | 0.20 |
| Queue Length 95th (m) | 0.2 | 0.0 | 5.7 |
| Control Delay (s) | 1.8 | 0.0 | 10.0 |
| Lane LOS | A | | A |
| Approach Delay (s) | 1.8 | 0.0 | 10.0 |
| Approach LOS | | | A |

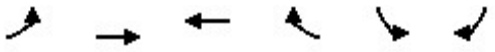
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.4 | | |
| Intersection Capacity Utilization | 25.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 2 | 4 | 2 | 50 | 9 | 2 | 3 | 11 | 27 | 0 | 10 | 2 |
| Future Volume (vph) | 2 | 4 | 2 | 50 | 9 | 2 | 3 | 11 | 27 | 0 | 10 | 2 |
| Peak Hour Factor | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Hourly flow rate (vph) | 3 | 6 | 3 | 77 | 14 | 3 | 5 | 17 | 42 | 0 | 15 | 3 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 94 | 64 | 18 |
| Volume Left (vph) | 3 | 77 | 5 | 0 |
| Volume Right (vph) | 3 | 3 | 42 | 3 |
| Hadj (s) | -0.10 | 0.14 | -0.33 | 0.06 |
| Departure Headway (s) | 4.1 | 4.2 | 3.8 | 4.3 |
| Degree Utilization, x | 0.01 | 0.11 | 0.07 | 0.02 |
| Capacity (veh/h) | 858 | 833 | 907 | 820 |
| Control Delay (s) | 7.1 | 7.7 | 7.1 | 7.3 |
| Approach Delay (s) | 7.1 | 7.7 | 7.1 | 7.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 7.4 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 22.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 4 | 375 | 258 | 56 | 62 | 0 |
| Future Volume (Veh/h) | 4 | 375 | 258 | 56 | 62 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 5 | 457 | 315 | 68 | 76 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 387 | | | | 820 | 353 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 387 | | | | 820 | 353 |
| 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 | | | | 78 | 100 |
| cM capacity (veh/h) | 1177 | | | | 344 | 692 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 462 | 383 | 76 |
| Volume Left | 5 | 0 | 76 |
| Volume Right | 0 | 68 | 0 |
| cSH | 1177 | 1700 | 344 |
| Volume to Capacity | 0.00 | 0.23 | 0.22 |
| Queue Length 95th (m) | 0.1 | 0.0 | 6.3 |
| Control Delay (s) | 0.1 | 0.0 | 18.4 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.1 | 0.0 | 18.4 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.6 | | |
| Intersection Capacity Utilization | 33.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 21 | 25 | 24 | 27 | 32 | 18 |
| Future Volume (Veh/h) | 21 | 25 | 24 | 27 | 32 | 18 |
| 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) | 26 | 31 | 30 | 34 | 40 | 22 |
| 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 | 149 | 47 | | | 64 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 149 | 47 | | | 64 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 97 | 97 | | | 97 | |
| cM capacity (veh/h) | 826 | 1028 | | | 1551 | |

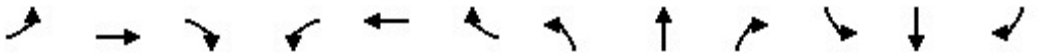
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 57 | 64 | 62 |
| Volume Left | 26 | 0 | 40 |
| Volume Right | 31 | 34 | 0 |
| cSH | 925 | 1700 | 1551 |
| Volume to Capacity | 0.06 | 0.04 | 0.03 |
| Queue Length 95th (m) | 1.5 | 0.0 | 0.6 |
| Control Delay (s) | 9.1 | 0.0 | 4.8 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.1 | 0.0 | 4.8 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 19.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 41 | 82 | 14 | 51 | 127 | 18 |
| Future Volume (Veh/h) | 41 | 82 | 14 | 51 | 127 | 18 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 46 | 92 | 16 | 57 | 143 | 20 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 138 | | 181 | 92 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 138 | | 181 | 92 |
| tC, single (s) | | | 4.1 | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.6 | 3.3 |
| p0 queue free % | | | 99 | | 82 | 98 |
| cM capacity (veh/h) | | | 1458 | | 773 | 971 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 138 | 73 | 163 |
| Volume Left | 0 | 16 | 143 |
| Volume Right | 92 | 0 | 20 |
| cSH | 1700 | 1458 | 793 |
| Volume to Capacity | 0.08 | 0.01 | 0.21 |
| Queue Length 95th (m) | 0.0 | 0.3 | 5.8 |
| Control Delay (s) | 0.0 | 1.7 | 10.7 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 1.7 | 10.7 |
| Approach LOS | | | B |

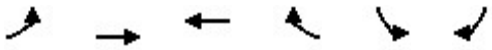
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.0 | | |
| Intersection Capacity Utilization | 28.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 27 | 191 | 16 | 35 | 198 | 10 | 24 | 16 | 41 | 10 | 9 | 19 |
| Future Volume (Veh/h) | 27 | 191 | 16 | 35 | 198 | 10 | 24 | 16 | 41 | 10 | 9 | 19 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 28 | 201 | 17 | 37 | 208 | 11 | 25 | 17 | 43 | 11 | 9 | 20 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 222 | | | 219 | | | 578 | 562 | 214 | 610 | 566 | 216 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 222 | | | 219 | | | 578 | 562 | 214 | 610 | 566 | 216 |
| tC, single (s) | 4.2 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 98 | | | 97 | | | 94 | 96 | 95 | 97 | 98 | 97 |
| cM capacity (veh/h) | 1274 | | | 1181 | | | 387 | 395 | 796 | 355 | 412 | 794 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 246 | 256 | 85 | 40 |
| Volume Left | 28 | 37 | 25 | 11 |
| Volume Right | 17 | 11 | 43 | 20 |
| cSH | 1274 | 1181 | 526 | 513 |
| Volume to Capacity | 0.02 | 0.03 | 0.16 | 0.08 |
| Queue Length 95th (m) | 0.5 | 0.7 | 4.4 | 1.9 |
| Control Delay (s) | 1.1 | 1.4 | 13.2 | 12.6 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 1.1 | 1.4 | 13.2 | 12.6 |
| Approach LOS | | | B | B |

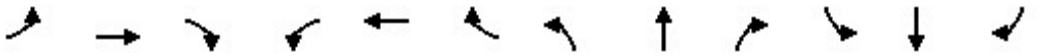
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.6 | | | |
| Intersection Capacity Utilization | 32.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 27 | 283 | 264 | 120 | 83 | 37 |
| Future Volume (Veh/h) | 27 | 283 | 264 | 120 | 83 | 37 |
| 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) | 28 | 298 | 278 | 126 | 87 | 39 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 410 | | | | 703 | 349 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 410 | | | | 703 | 349 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 98 | | | | 77 | 94 |
| cM capacity (veh/h) | 1151 | | | | 385 | 693 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 326 | 404 | 126 |
| Volume Left | 28 | 0 | 87 |
| Volume Right | 0 | 126 | 39 |
| cSH | 1151 | 1700 | 446 |
| Volume to Capacity | 0.02 | 0.24 | 0.28 |
| Queue Length 95th (m) | 0.6 | 0.0 | 8.7 |
| Control Delay (s) | 0.9 | 0.0 | 16.2 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.9 | 0.0 | 16.2 |
| Approach LOS | | | C |

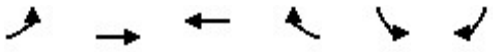
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.7 | | |
| Intersection Capacity Utilization | 51.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 17 | 332 | 42 | 9 | 355 | 4 | 23 | 7 | 17 | 12 | 3 | 10 |
| Future Volume (Veh/h) | 17 | 332 | 42 | 9 | 355 | 4 | 23 | 7 | 17 | 12 | 3 | 10 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 19 | 369 | 47 | 10 | 394 | 4 | 26 | 8 | 19 | 13 | 3 | 11 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 416 | | | 433 | | | 880 | 884 | 416 | 894 | 905 | 418 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 416 | | | 433 | | | 880 | 884 | 416 | 894 | 905 | 418 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 87 | 97 | 97 | 94 | 99 | 98 |
| cM capacity (veh/h) | 1099 | | | 1054 | | | 203 | 270 | 612 | 234 | 263 | 627 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 435 | 408 | 53 | 27 |
| Volume Left | 19 | 10 | 26 | 13 |
| Volume Right | 47 | 4 | 19 | 11 |
| cSH | 1099 | 1054 | 281 | 319 |
| Volume to Capacity | 0.02 | 0.01 | 0.19 | 0.08 |
| Queue Length 95th (m) | 0.4 | 0.2 | 5.2 | 2.1 |
| Control Delay (s) | 0.5 | 0.3 | 20.8 | 17.3 |
| Lane LOS | A | A | C | C |
| Approach Delay (s) | 0.5 | 0.3 | 20.8 | 17.3 |
| Approach LOS | | | C | C |

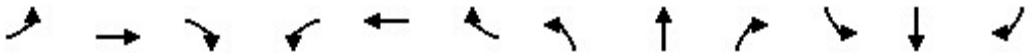
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.1 | | | |
| Intersection Capacity Utilization | 40.7% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 37 | 37 | 32 | 132 | 86 | 22 |
| Future Volume (Veh/h) | 37 | 37 | 32 | 132 | 86 | 22 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 40 | 40 | 35 | 143 | 93 | 24 |
| 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 | 178 | | | | 226 | 106 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 178 | | | | 226 | 106 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 87 | 97 |
| cM capacity (veh/h) | 1398 | | | | 740 | 948 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 80 | 178 | 117 |
| Volume Left | 40 | 0 | 93 |
| Volume Right | 0 | 143 | 24 |
| cSH | 1398 | 1700 | 775 |
| Volume to Capacity | 0.03 | 0.10 | 0.15 |
| Queue Length 95th (m) | 0.7 | 0.0 | 4.0 |
| Control Delay (s) | 3.9 | 0.0 | 10.5 |
| Lane LOS | A | | B |
| Approach Delay (s) | 3.9 | 0.0 | 10.5 |
| Approach LOS | | | B |

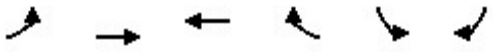
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 29.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| 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 | 10 | 2 | 33 | 7 | 2 | 6 | 16 | 70 | 0 | 7 | 0 |
| Future Volume (vph) | 0 | 10 | 2 | 33 | 7 | 2 | 6 | 16 | 70 | 0 | 7 | 0 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 0 | 14 | 3 | 47 | 10 | 3 | 9 | 23 | 100 | 0 | 10 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 17 | 60 | 132 | 10 |
| Volume Left (vph) | 0 | 47 | 9 | 0 |
| Volume Right (vph) | 3 | 3 | 100 | 0 |
| Hadj (s) | -0.11 | 0.13 | -0.40 | 0.00 |
| Departure Headway (s) | 4.1 | 4.3 | 3.7 | 4.2 |
| Degree Utilization, x | 0.02 | 0.07 | 0.14 | 0.01 |
| Capacity (veh/h) | 833 | 803 | 947 | 834 |
| Control Delay (s) | 7.2 | 7.7 | 7.3 | 7.2 |
| Approach Delay (s) | 7.2 | 7.7 | 7.3 | 7.2 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 7.4 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 28.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 356 | 359 | 107 | 58 | 5 |
| Future Volume (Veh/h) | 5 | 356 | 359 | 107 | 58 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 6 | 405 | 408 | 122 | 66 | 6 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 552 | | | | 908 | 491 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 552 | | | | 908 | 491 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 78 | 99 |
| cM capacity (veh/h) | 1001 | | | | 298 | 566 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 411 | 530 | 72 |
| Volume Left | 6 | 0 | 66 |
| Volume Right | 0 | 122 | 6 |
| cSH | 1001 | 1700 | 310 |
| Volume to Capacity | 0.01 | 0.31 | 0.23 |
| Queue Length 95th (m) | 0.1 | 0.0 | 6.7 |
| Control Delay (s) | 0.2 | 0.0 | 20.1 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.2 | 0.0 | 20.1 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 35.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 44 | 48 | 10 | 24 | 21 | 18 |
| Future Volume (Veh/h) | 44 | 48 | 10 | 24 | 21 | 18 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 58 | 63 | 13 | 32 | 28 | 24 |
| 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 | 109 | 29 | | | 45 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 109 | 29 | | | 45 | |
| tC, single (s) | 6.4 | 6.5 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.6 | | | 2.3 | |
| p0 queue free % | 93 | 93 | | | 98 | |
| cM capacity (veh/h) | 876 | 963 | | | 1489 | |

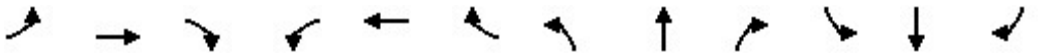
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 121 | 45 | 52 |
| Volume Left | 58 | 0 | 28 |
| Volume Right | 63 | 32 | 0 |
| cSH | 920 | 1700 | 1489 |
| Volume to Capacity | 0.13 | 0.03 | 0.02 |
| Queue Length 95th (m) | 3.4 | 0.0 | 0.4 |
| Control Delay (s) | 9.5 | 0.0 | 4.1 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.5 | 0.0 | 4.1 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.3 | | |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 56 | 126 | 39 | 55 | 43 | 17 |
| Future Volume (Veh/h) | 56 | 126 | 39 | 55 | 43 | 17 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Hourly flow rate (vph) | 75 | 168 | 52 | 73 | 57 | 23 |
| 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 | | | 243 | | 336 | 159 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 243 | | 336 | 159 |
| tC, single (s) | | | 4.1 | | 6.9 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 4.0 | 3.3 |
| p0 queue free % | | | 96 | | 90 | 97 |
| cM capacity (veh/h) | | | 1335 | | 550 | 892 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 243 | 125 | 80 |
| Volume Left | 0 | 52 | 57 |
| Volume Right | 168 | 0 | 23 |
| cSH | 1700 | 1335 | 618 |
| Volume to Capacity | 0.14 | 0.04 | 0.13 |
| Queue Length 95th (m) | 0.0 | 0.9 | 3.4 |
| Control Delay (s) | 0.0 | 3.4 | 11.7 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 3.4 | 11.7 |
| Approach LOS | | | B |

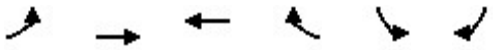
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.0 | | |
| Intersection Capacity Utilization | 29.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 157 | 19 | 39 | 140 | 11 | 12 | 3 | 26 | 13 | 12 | 42 |
| Future Volume (Veh/h) | 20 | 157 | 19 | 39 | 140 | 11 | 12 | 3 | 26 | 13 | 12 | 42 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 24 | 191 | 23 | 48 | 171 | 13 | 15 | 4 | 32 | 16 | 15 | 51 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 184 | | | 214 | | | 584 | 530 | 204 | 560 | 536 | 178 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 184 | | | 214 | | | 584 | 530 | 204 | 560 | 536 | 178 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 98 | | | 96 | | | 96 | 99 | 96 | 96 | 96 | 94 |
| cM capacity (veh/h) | 1290 | | | 1105 | | | 360 | 429 | 779 | 389 | 415 | 869 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 238 | 232 | 51 | 82 |
| Volume Left | 24 | 48 | 15 | 16 |
| Volume Right | 23 | 13 | 32 | 51 |
| cSH | 1290 | 1105 | 554 | 603 |
| Volume to Capacity | 0.02 | 0.04 | 0.09 | 0.14 |
| Queue Length 95th (m) | 0.4 | 1.0 | 2.3 | 3.6 |
| Control Delay (s) | 0.9 | 2.1 | 12.2 | 11.9 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.9 | 2.1 | 12.2 | 11.9 |
| Approach LOS | | | B | B |

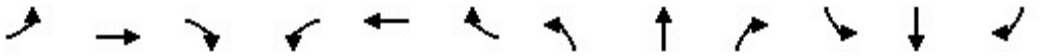
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.8 | | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 30 | 279 | 246 | 53 | 114 | 60 |
| Future Volume (Veh/h) | 30 | 279 | 246 | 53 | 114 | 60 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 42 | 388 | 342 | 74 | 158 | 83 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 426 | | | | 862 | 390 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 426 | | | | 862 | 390 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 96 | | | | 45 | 87 |
| cM capacity (veh/h) | 1079 | | | | 290 | 648 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 430 | 416 | 241 |
| Volume Left | 42 | 0 | 158 |
| Volume Right | 0 | 74 | 83 |
| cSH | 1079 | 1700 | 358 |
| Volume to Capacity | 0.04 | 0.24 | 0.67 |
| Queue Length 95th (m) | 0.9 | 0.0 | 35.6 |
| Control Delay (s) | 1.2 | 0.0 | 33.5 |
| Lane LOS | A | | D |
| Approach Delay (s) | 1.2 | 0.0 | 33.5 |
| Approach LOS | | | D |

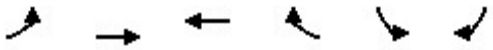
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.9 | | |
| Intersection Capacity Utilization | 52.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 351 | 24 | 8 | 263 | 3 | 42 | 2 | 12 | 79 | 5 | 12 |
| Future Volume (Veh/h) | 12 | 351 | 24 | 8 | 263 | 3 | 42 | 2 | 12 | 79 | 5 | 12 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 16 | 456 | 31 | 10 | 342 | 4 | 55 | 3 | 16 | 103 | 6 | 16 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 353 | | | 493 | | | 896 | 882 | 478 | 892 | 896 | 354 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 353 | | | 493 | | | 896 | 882 | 478 | 892 | 896 | 354 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 77 | 99 | 97 | 57 | 98 | 98 |
| cM capacity (veh/h) | 1209 | | | 1075 | | | 237 | 277 | 553 | 239 | 272 | 688 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 503 | 356 | 74 | 125 |
| Volume Left | 16 | 10 | 55 | 103 |
| Volume Right | 31 | 4 | 16 | 16 |
| cSH | 1209 | 1075 | 272 | 263 |
| Volume to Capacity | 0.01 | 0.01 | 0.27 | 0.48 |
| Queue Length 95th (m) | 0.3 | 0.2 | 8.2 | 18.2 |
| Control Delay (s) | 0.4 | 0.3 | 23.1 | 30.6 |
| Lane LOS | A | A | C | D |
| Approach Delay (s) | 0.4 | 0.3 | 23.1 | 30.6 |
| Approach LOS | | | C | D |

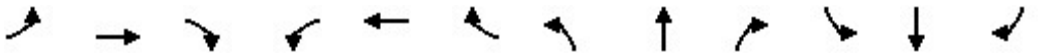
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.5 | | |
| Intersection Capacity Utilization | 38.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 15 | 46 | 56 | 38 | 135 | 44 |
| Future Volume (Veh/h) | 15 | 46 | 56 | 38 | 135 | 44 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 16 | 50 | 61 | 41 | 147 | 48 |
| 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 | | | | 164 | 82 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 102 | | | | 164 | 82 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 82 | 95 |
| cM capacity (veh/h) | 1490 | | | | 818 | 978 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 66 | 102 | 195 |
| Volume Left | 16 | 0 | 147 |
| Volume Right | 0 | 41 | 48 |
| cSH | 1490 | 1700 | 853 |
| Volume to Capacity | 0.01 | 0.06 | 0.23 |
| Queue Length 95th (m) | 0.2 | 0.0 | 6.7 |
| Control Delay (s) | 1.9 | 0.0 | 10.5 |
| Lane LOS | A | | B |
| Approach Delay (s) | 1.9 | 0.0 | 10.5 |
| Approach LOS | | | B |

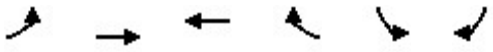
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 6.0 | |
| Intersection Capacity Utilization | | 26.7% | ICU Level of Service |
| Analysis Period (min) | | 15 | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 2 | 15 | 2 | 176 | 40 | 2 | 3 | 11 | 73 | 0 | 10 | 2 |
| Future Volume (vph) | 2 | 15 | 2 | 176 | 40 | 2 | 3 | 11 | 73 | 0 | 10 | 2 |
| Peak Hour Factor | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Hourly flow rate (vph) | 3 | 23 | 3 | 271 | 62 | 3 | 5 | 17 | 112 | 0 | 15 | 3 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 29 | 336 | 134 | 18 |
| Volume Left (vph) | 3 | 271 | 5 | 0 |
| Volume Right (vph) | 3 | 3 | 112 | 3 |
| Hadj (s) | -0.04 | 0.16 | -0.47 | 0.06 |
| Departure Headway (s) | 4.6 | 4.4 | 4.3 | 5.0 |
| Degree Utilization, x | 0.04 | 0.41 | 0.16 | 0.02 |
| Capacity (veh/h) | 741 | 783 | 773 | 655 |
| Control Delay (s) | 7.8 | 10.6 | 8.1 | 8.1 |
| Approach Delay (s) | 7.8 | 10.6 | 8.1 | 8.1 |
| Approach LOS | A | B | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 9.7 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 33.9% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 4 | 438 | 258 | 102 | 125 | 0 |
| Future Volume (Veh/h) | 4 | 438 | 258 | 102 | 125 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 5 | 534 | 315 | 124 | 152 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 443 | | | | 925 | 381 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 443 | | | | 925 | 381 |
| 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 | | | | 49 | 100 |
| cM capacity (veh/h) | 1122 | | | | 298 | 667 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 539 | 439 | 152 |
| Volume Left | 5 | 0 | 152 |
| Volume Right | 0 | 124 | 0 |
| cSH | 1122 | 1700 | 298 |
| Volume to Capacity | 0.00 | 0.26 | 0.51 |
| Queue Length 95th (m) | 0.1 | 0.0 | 20.6 |
| Control Delay (s) | 0.1 | 0.0 | 29.0 |
| Lane LOS | A | | D |
| Approach Delay (s) | 0.1 | 0.0 | 29.0 |
| Approach LOS | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 39.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 36 | 40 | 24 | 51 | 57 | 18 |
| Future Volume (Veh/h) | 36 | 40 | 24 | 51 | 57 | 18 |
| 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) | 45 | 50 | 30 | 64 | 71 | 22 |
| 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 | 226 | 62 | | | 94 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 226 | 62 | | | 94 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 94 | 95 | | | 95 | |
| cM capacity (veh/h) | 731 | 1009 | | | 1513 | |

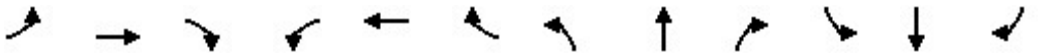
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 95 | 94 | 93 |
| Volume Left | 45 | 0 | 71 |
| Volume Right | 50 | 64 | 0 |
| cSH | 855 | 1700 | 1513 |
| Volume to Capacity | 0.11 | 0.06 | 0.05 |
| Queue Length 95th (m) | 2.8 | 0.0 | 1.1 |
| Control Delay (s) | 9.7 | 0.0 | 5.8 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.7 | 0.0 | 5.8 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 21.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 77 | 82 | 21 | 73 | 127 | 30 |
| Future Volume (Veh/h) | 77 | 82 | 21 | 73 | 127 | 30 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 87 | 92 | 24 | 82 | 143 | 34 |
| 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 | | | 179 | | 263 | 133 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 179 | | 263 | 133 |
| tC, single (s) | | | 4.1 | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.6 | 3.3 |
| p0 queue free % | | | 98 | | 79 | 96 |
| cM capacity (veh/h) | | | 1409 | | 689 | 922 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 179 | 106 | 177 |
| Volume Left | 0 | 24 | 143 |
| Volume Right | 92 | 0 | 34 |
| cSH | 1700 | 1409 | 724 |
| Volume to Capacity | 0.11 | 0.02 | 0.24 |
| Queue Length 95th (m) | 0.0 | 0.4 | 7.3 |
| Control Delay (s) | 0.0 | 1.8 | 11.6 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 1.8 | 11.6 |
| Approach LOS | | | B |

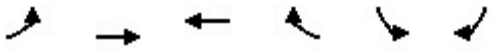
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.9 | | |
| Intersection Capacity Utilization | 32.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 51 | 191 | 16 | 35 | 198 | 10 | 24 | 16 | 41 | 10 | 9 | 34 |
| Future Volume (Veh/h) | 51 | 191 | 16 | 35 | 198 | 10 | 24 | 16 | 41 | 10 | 9 | 34 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 54 | 201 | 17 | 37 | 208 | 11 | 25 | 17 | 43 | 11 | 9 | 36 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 222 | | | 219 | | | 646 | 614 | 214 | 662 | 618 | 216 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 222 | | | 219 | | | 646 | 614 | 214 | 662 | 618 | 216 |
| tC, single (s) | 4.2 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 96 | | | 97 | | | 93 | 95 | 95 | 97 | 98 | 95 |
| cM capacity (veh/h) | 1274 | | | 1181 | | | 335 | 361 | 796 | 322 | 377 | 794 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 272 | 256 | 85 | 56 |
| Volume Left | 54 | 37 | 25 | 11 |
| Volume Right | 17 | 11 | 43 | 36 |
| cSH | 1274 | 1181 | 484 | 541 |
| Volume to Capacity | 0.04 | 0.03 | 0.18 | 0.10 |
| Queue Length 95th (m) | 1.0 | 0.7 | 4.8 | 2.6 |
| Control Delay (s) | 1.9 | 1.4 | 14.0 | 12.4 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 1.9 | 1.4 | 14.0 | 12.4 |
| Approach LOS | | | B | B |

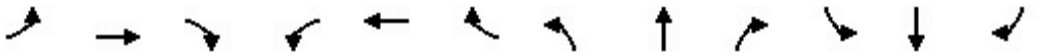
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 4.1 | | | |
| Intersection Capacity Utilization | 35.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 39 | 283 | 264 | 120 | 83 | 44 |
| Future Volume (Veh/h) | 39 | 283 | 264 | 120 | 83 | 44 |
| 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) | 41 | 298 | 278 | 126 | 87 | 46 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 410 | | | | 729 | 349 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 410 | | | | 729 | 349 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 96 | | | | 76 | 93 |
| cM capacity (veh/h) | 1151 | | | | 367 | 693 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 339 | 404 | 133 |
| Volume Left | 41 | 0 | 87 |
| Volume Right | 0 | 126 | 46 |
| cSH | 1151 | 1700 | 438 |
| Volume to Capacity | 0.04 | 0.24 | 0.30 |
| Queue Length 95th (m) | 0.8 | 0.0 | 9.6 |
| Control Delay (s) | 1.3 | 0.0 | 16.8 |
| Lane LOS | A | | C |
| Approach Delay (s) | 1.3 | 0.0 | 16.8 |
| Approach LOS | | | C |

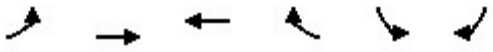
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 56.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 17 | 332 | 42 | 9 | 355 | 4 | 23 | 7 | 17 | 56 | 3 | 10 |
| Future Volume (Veh/h) | 17 | 332 | 42 | 9 | 355 | 4 | 23 | 7 | 17 | 56 | 3 | 10 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 19 | 369 | 47 | 10 | 394 | 4 | 26 | 8 | 19 | 62 | 3 | 11 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 416 | | | 433 | | | 880 | 884 | 416 | 894 | 905 | 418 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 416 | | | 433 | | | 880 | 884 | 416 | 894 | 905 | 418 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 87 | 97 | 97 | 73 | 99 | 98 |
| cM capacity (veh/h) | 1099 | | | 1054 | | | 203 | 270 | 612 | 234 | 263 | 627 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 435 | 408 | 53 | 76 |
| Volume Left | 19 | 10 | 26 | 62 |
| Volume Right | 47 | 4 | 19 | 11 |
| cSH | 1099 | 1054 | 281 | 258 |
| Volume to Capacity | 0.02 | 0.01 | 0.19 | 0.29 |
| Queue Length 95th (m) | 0.4 | 0.2 | 5.2 | 9.0 |
| Control Delay (s) | 0.5 | 0.3 | 20.8 | 24.6 |
| Lane LOS | A | A | C | C |
| Approach Delay (s) | 0.5 | 0.3 | 20.8 | 24.6 |
| Approach LOS | | | C | C |

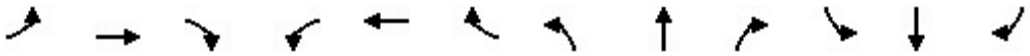
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.4 | | | |
| Intersection Capacity Utilization | 42.2% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 50 | 73 | 54 | 132 | 86 | 30 |
| Future Volume (Veh/h) | 50 | 73 | 54 | 132 | 86 | 30 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 54 | 79 | 59 | 143 | 93 | 33 |
| 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 | 202 | | | | 318 | 130 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 202 | | | | 318 | 130 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 96 | | | | 86 | 96 |
| cM capacity (veh/h) | 1370 | | | | 649 | 919 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 133 | 202 | 126 |
| Volume Left | 54 | 0 | 93 |
| Volume Right | 0 | 143 | 33 |
| cSH | 1370 | 1700 | 703 |
| Volume to Capacity | 0.04 | 0.12 | 0.18 |
| Queue Length 95th (m) | 0.9 | 0.0 | 4.9 |
| Control Delay (s) | 3.3 | 0.0 | 11.2 |
| Lane LOS | A | | B |
| Approach Delay (s) | 3.3 | 0.0 | 11.2 |
| Approach LOS | | | B |

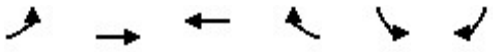
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 34.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 46 | 2 | 121 | 29 | 2 | 6 | 16 | 215 | 0 | 7 | 0 |
| Future Volume (vph) | 0 | 46 | 2 | 121 | 29 | 2 | 6 | 16 | 215 | 0 | 7 | 0 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 0 | 66 | 3 | 173 | 41 | 3 | 9 | 23 | 307 | 0 | 10 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 69 | 217 | 339 | 10 |
| Volume Left (vph) | 0 | 173 | 9 | 0 |
| Volume Right (vph) | 3 | 3 | 307 | 0 |
| Hadj (s) | -0.03 | 0.15 | -0.52 | 0.00 |
| Departure Headway (s) | 4.9 | 4.9 | 4.1 | 5.0 |
| Degree Utilization, x | 0.09 | 0.30 | 0.39 | 0.01 |
| Capacity (veh/h) | 662 | 686 | 832 | 647 |
| Control Delay (s) | 8.5 | 10.0 | 9.7 | 8.1 |
| Approach Delay (s) | 8.5 | 10.0 | 9.7 | 8.1 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 9.6 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 42.4% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 400 | 359 | 252 | 102 | 5 |
| Future Volume (Veh/h) | 5 | 400 | 359 | 252 | 102 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 6 | 455 | 408 | 286 | 116 | 6 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 716 | | | | 1040 | 573 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 716 | | | | 1040 | 573 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 53 | 99 |
| cM capacity (veh/h) | 870 | | | | 249 | 509 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 461 | 694 | 122 |
| Volume Left | 6 | 0 | 116 |
| Volume Right | 0 | 286 | 6 |
| cSH | 870 | 1700 | 255 |
| Volume to Capacity | 0.01 | 0.41 | 0.48 |
| Queue Length 95th (m) | 0.2 | 0.0 | 18.3 |
| Control Delay (s) | 0.2 | 0.0 | 31.4 |
| Lane LOS | A | | D |
| Approach Delay (s) | 0.2 | 0.0 | 31.4 |
| Approach LOS | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 46.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 23 | 27 | 11 | 17 | 15 | 19 |
| Future Volume (Veh/h) | 23 | 27 | 11 | 17 | 15 | 19 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 30 | 36 | 14 | 22 | 20 | 25 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 90 | 25 | | | 36 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 90 | 25 | | | 36 | |
| tC, single (s) | 6.4 | 6.5 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.6 | | | 2.3 | |
| p0 queue free % | 97 | 96 | | | 99 | |
| cM capacity (veh/h) | 903 | 968 | | | 1501 | |

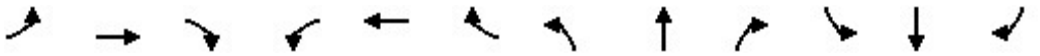
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 66 | 36 | 45 |
| Volume Left | 30 | 0 | 20 |
| Volume Right | 36 | 22 | 0 |
| cSH | 938 | 1700 | 1501 |
| Volume to Capacity | 0.07 | 0.02 | 0.01 |
| Queue Length 95th (m) | 1.7 | 0.0 | 0.3 |
| Control Delay (s) | 9.1 | 0.0 | 3.4 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.1 | 0.0 | 3.4 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.1 | | |
| Intersection Capacity Utilization | 18.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 46 | 127 | 31 | 25 | 44 | 14 |
| Future Volume (Veh/h) | 46 | 127 | 31 | 25 | 44 | 14 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Hourly flow rate (vph) | 61 | 169 | 41 | 33 | 59 | 19 |
| 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 | | | 230 | | 260 | 146 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 230 | | 260 | 146 |
| tC, single (s) | | | 4.1 | | 6.9 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 4.0 | 3.3 |
| p0 queue free % | | | 97 | | 90 | 98 |
| cM capacity (veh/h) | | | 1350 | | 617 | 907 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 230 | 74 | 78 |
| Volume Left | 0 | 41 | 59 |
| Volume Right | 169 | 0 | 19 |
| cSH | 1700 | 1350 | 669 |
| Volume to Capacity | 0.14 | 0.03 | 0.12 |
| Queue Length 95th (m) | 0.0 | 0.7 | 3.0 |
| Control Delay (s) | 0.0 | 4.4 | 11.1 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 4.4 | 11.1 |
| Approach LOS | | | B |

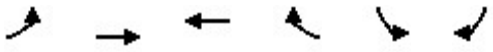
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 26.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 167 | 20 | 42 | 146 | 12 | 13 | 3 | 28 | 14 | 13 | 21 |
| Future Volume (Veh/h) | 12 | 167 | 20 | 42 | 146 | 12 | 13 | 3 | 28 | 14 | 13 | 21 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 15 | 204 | 24 | 51 | 178 | 15 | 16 | 4 | 34 | 17 | 16 | 26 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 193 | | | 228 | | | 568 | 541 | 218 | 572 | 546 | 186 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 193 | | | 228 | | | 568 | 541 | 218 | 572 | 546 | 186 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 99 | | | 95 | | | 96 | 99 | 96 | 96 | 96 | 97 |
| cM capacity (veh/h) | 1279 | | | 1090 | | | 380 | 425 | 766 | 382 | 411 | 860 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 243 | 244 | 54 | 59 |
| Volume Left | 15 | 51 | 16 | 17 |
| Volume Right | 24 | 15 | 34 | 26 |
| cSH | 1279 | 1090 | 563 | 519 |
| Volume to Capacity | 0.01 | 0.05 | 0.10 | 0.11 |
| Queue Length 95th (m) | 0.3 | 1.1 | 2.4 | 2.9 |
| Control Delay (s) | 0.6 | 2.1 | 12.1 | 12.8 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.6 | 2.1 | 12.1 | 12.8 |
| Approach LOS | | | B | B |

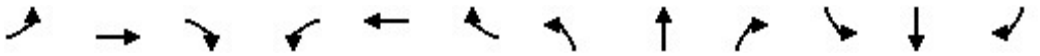
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.4 | | | |
| Intersection Capacity Utilization | 34.0% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 28 | 298 | 260 | 55 | 115 | 53 |
| Future Volume (Veh/h) | 28 | 298 | 260 | 55 | 115 | 53 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 39 | 414 | 361 | 76 | 160 | 74 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 447 | | | | 902 | 410 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 447 | | | | 902 | 410 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 96 | | | | 42 | 88 |
| cM capacity (veh/h) | 1059 | | | | 275 | 631 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 453 | 437 | 234 |
| Volume Left | 39 | 0 | 160 |
| Volume Right | 0 | 76 | 74 |
| cSH | 1059 | 1700 | 334 |
| Volume to Capacity | 0.04 | 0.26 | 0.70 |
| Queue Length 95th (m) | 0.9 | 0.0 | 38.0 |
| Control Delay (s) | 1.1 | 0.0 | 37.4 |
| Lane LOS | A | | E |
| Approach Delay (s) | 1.1 | 0.0 | 37.4 |
| Approach LOS | | | E |

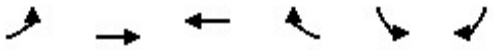
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.2 | | |
| Intersection Capacity Utilization | 54.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 13 | 368 | 25 | 9 | 278 | 3 | 43 | 2 | 13 | 17 | 5 | 13 |
| Future Volume (Veh/h) | 13 | 368 | 25 | 9 | 278 | 3 | 43 | 2 | 13 | 17 | 5 | 13 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 17 | 478 | 32 | 12 | 361 | 4 | 56 | 3 | 17 | 22 | 6 | 17 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 372 | | | 516 | | | 944 | 930 | 500 | 940 | 944 | 373 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 372 | | | 516 | | | 944 | 930 | 500 | 940 | 944 | 373 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 74 | 99 | 97 | 90 | 98 | 97 |
| cM capacity (veh/h) | 1190 | | | 1054 | | | 218 | 259 | 537 | 220 | 255 | 671 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 527 | 377 | 76 | 45 |
| Volume Left | 17 | 12 | 56 | 22 |
| Volume Right | 32 | 4 | 17 | 17 |
| cSH | 1190 | 1054 | 253 | 302 |
| Volume to Capacity | 0.01 | 0.01 | 0.30 | 0.15 |
| Queue Length 95th (m) | 0.3 | 0.3 | 9.3 | 3.9 |
| Control Delay (s) | 0.4 | 0.4 | 25.2 | 19.0 |
| Lane LOS | A | A | D | C |
| Approach Delay (s) | 0.4 | 0.4 | 25.2 | 19.0 |
| Approach LOS | | | D | C |

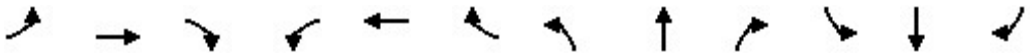
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.1 | | | |
| Intersection Capacity Utilization | 38.2% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 11 | 37 | 27 | 38 | 135 | 33 |
| Future Volume (Veh/h) | 11 | 37 | 27 | 38 | 135 | 33 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 12 | 40 | 29 | 41 | 147 | 36 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 70 | | | | 114 | 50 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 70 | | | | 114 | 50 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 83 | 96 |
| cM capacity (veh/h) | 1531 | | | | 876 | 1019 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 52 | 70 | 183 |
| Volume Left | 12 | 0 | 147 |
| Volume Right | 0 | 41 | 36 |
| cSH | 1531 | 1700 | 901 |
| Volume to Capacity | 0.01 | 0.04 | 0.20 |
| Queue Length 95th (m) | 0.2 | 0.0 | 5.8 |
| Control Delay (s) | 1.7 | 0.0 | 10.0 |
| Lane LOS | A | | B |
| Approach Delay (s) | 1.7 | 0.0 | 10.0 |
| Approach LOS | | | B |

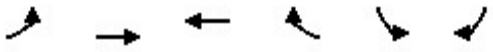
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.3 | | |
| Intersection Capacity Utilization | 25.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 2 | 4 | 2 | 52 | 9 | 2 | 3 | 12 | 28 | 0 | 11 | 2 |
| Future Volume (vph) | 2 | 4 | 2 | 52 | 9 | 2 | 3 | 12 | 28 | 0 | 11 | 2 |
| Peak Hour Factor | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Hourly flow rate (vph) | 3 | 6 | 3 | 80 | 14 | 3 | 5 | 18 | 43 | 0 | 17 | 3 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 97 | 66 | 20 |
| Volume Left (vph) | 3 | 80 | 5 | 0 |
| Volume Right (vph) | 3 | 3 | 43 | 3 |
| Hadj (s) | -0.10 | 0.15 | -0.33 | 0.07 |
| Departure Headway (s) | 4.1 | 4.2 | 3.8 | 4.3 |
| Degree Utilization, x | 0.01 | 0.11 | 0.07 | 0.02 |
| Capacity (veh/h) | 855 | 830 | 903 | 815 |
| Control Delay (s) | 7.1 | 7.8 | 7.1 | 7.4 |
| Approach Delay (s) | 7.1 | 7.8 | 7.1 | 7.4 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 7.5 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 22.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 4 | 394 | 273 | 60 | 65 | 0 |
| Future Volume (Veh/h) | 4 | 394 | 273 | 60 | 65 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 5 | 480 | 333 | 73 | 79 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 410 | | | | 864 | 374 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 410 | | | | 864 | 374 |
| 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 | | | | 76 | 100 |
| cM capacity (veh/h) | 1154 | | | | 324 | 674 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 485 | 406 | 79 |
| Volume Left | 5 | 0 | 79 |
| Volume Right | 0 | 73 | 0 |
| cSH | 1154 | 1700 | 324 |
| Volume to Capacity | 0.00 | 0.24 | 0.24 |
| Queue Length 95th (m) | 0.1 | 0.0 | 7.1 |
| Control Delay (s) | 0.1 | 0.0 | 19.6 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.1 | 0.0 | 19.6 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.7 | | |
| Intersection Capacity Utilization | 34.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 26 | 26 | 28 | 33 | 19 |
| Future Volume (Veh/h) | 22 | 26 | 26 | 28 | 33 | 19 |
| 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) | 28 | 32 | 32 | 35 | 41 | 24 |
| 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 | 156 | 50 | | | 67 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 156 | 50 | | | 67 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 97 | 97 | | | 97 | |
| cM capacity (veh/h) | 818 | 1025 | | | 1547 | |

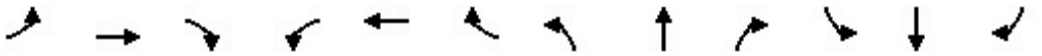
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 60 | 67 | 65 |
| Volume Left | 28 | 0 | 41 |
| Volume Right | 32 | 35 | 0 |
| cSH | 917 | 1700 | 1547 |
| Volume to Capacity | 0.07 | 0.04 | 0.03 |
| Queue Length 95th (m) | 1.6 | 0.0 | 0.6 |
| Control Delay (s) | 9.2 | 0.0 | 4.7 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.2 | 0.0 | 4.7 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 19.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 43 | 83 | 15 | 53 | 128 | 19 |
| Future Volume (Veh/h) | 43 | 83 | 15 | 53 | 128 | 19 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 48 | 93 | 17 | 60 | 144 | 21 |
| 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 | | | 141 | | 188 | 94 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 141 | | 188 | 94 |
| tC, single (s) | | | 4.1 | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.6 | 3.3 |
| p0 queue free % | | | 99 | | 81 | 98 |
| cM capacity (veh/h) | | | 1455 | | 765 | 968 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 141 | 77 | 165 |
| Volume Left | 0 | 17 | 144 |
| Volume Right | 93 | 0 | 21 |
| cSH | 1700 | 1455 | 786 |
| Volume to Capacity | 0.08 | 0.01 | 0.21 |
| Queue Length 95th (m) | 0.0 | 0.3 | 6.0 |
| Control Delay (s) | 0.0 | 1.7 | 10.8 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 1.7 | 10.8 |
| Approach LOS | | | B |

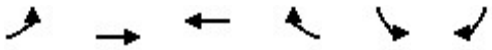
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.0 | | |
| Intersection Capacity Utilization | 29.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 28 | 200 | 17 | 38 | 209 | 11 | 26 | 17 | 45 | 11 | 10 | 20 |
| Future Volume (Veh/h) | 28 | 200 | 17 | 38 | 209 | 11 | 26 | 17 | 45 | 11 | 10 | 20 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 29 | 211 | 18 | 40 | 220 | 12 | 27 | 18 | 47 | 12 | 11 | 21 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 235 | | | 230 | | | 612 | 594 | 224 | 646 | 597 | 229 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 235 | | | 230 | | | 612 | 594 | 224 | 646 | 597 | 229 |
| tC, single (s) | 4.2 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 98 | | | 97 | | | 93 | 95 | 94 | 96 | 97 | 97 |
| cM capacity (veh/h) | 1260 | | | 1169 | | | 364 | 378 | 785 | 332 | 393 | 781 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 258 | 272 | 92 | 44 |
| Volume Left | 29 | 40 | 27 | 12 |
| Volume Right | 18 | 12 | 47 | 21 |
| cSH | 1260 | 1169 | 506 | 484 |
| Volume to Capacity | 0.02 | 0.03 | 0.18 | 0.09 |
| Queue Length 95th (m) | 0.5 | 0.8 | 5.0 | 2.3 |
| Control Delay (s) | 1.1 | 1.5 | 13.7 | 13.2 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 1.1 | 1.5 | 13.7 | 13.2 |
| Approach LOS | | | B | B |

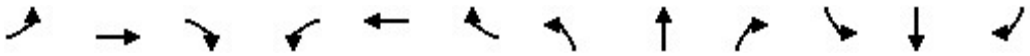
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.8 | | | |
| Intersection Capacity Utilization | 34.3% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 28 | 299 | 280 | 121 | 84 | 39 |
| Future Volume (Veh/h) | 28 | 299 | 280 | 121 | 84 | 39 |
| 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) | 29 | 315 | 295 | 127 | 88 | 41 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 428 | | | | 740 | 366 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 428 | | | | 740 | 366 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 97 | | | | 76 | 94 |
| cM capacity (veh/h) | 1134 | | | | 366 | 677 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 344 | 422 | 129 |
| Volume Left | 29 | 0 | 88 |
| Volume Right | 0 | 127 | 41 |
| cSH | 1134 | 1700 | 428 |
| Volume to Capacity | 0.03 | 0.25 | 0.30 |
| Queue Length 95th (m) | 0.6 | 0.0 | 9.5 |
| Control Delay (s) | 0.9 | 0.0 | 17.0 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.9 | 0.0 | 17.0 |
| Approach LOS | | | C |

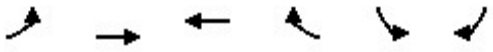
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.8 | | |
| Intersection Capacity Utilization | 53.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 18 | 350 | 43 | 10 | 371 | 4 | 23 | 7 | 18 | 13 | 3 | 11 |
| Future Volume (Veh/h) | 18 | 350 | 43 | 10 | 371 | 4 | 23 | 7 | 18 | 13 | 3 | 11 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 20 | 389 | 48 | 11 | 412 | 4 | 26 | 8 | 20 | 14 | 3 | 12 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 434 | | | 454 | | | 924 | 926 | 437 | 938 | 948 | 436 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 434 | | | 454 | | | 924 | 926 | 437 | 938 | 948 | 436 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 86 | 97 | 97 | 94 | 99 | 98 |
| cM capacity (veh/h) | 1082 | | | 1035 | | | 188 | 255 | 596 | 217 | 247 | 612 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 457 | 427 | 54 | 29 |
| Volume Left | 20 | 11 | 26 | 14 |
| Volume Right | 48 | 4 | 20 | 12 |
| cSH | 1082 | 1035 | 266 | 301 |
| Volume to Capacity | 0.02 | 0.01 | 0.20 | 0.10 |
| Queue Length 95th (m) | 0.4 | 0.2 | 5.7 | 2.4 |
| Control Delay (s) | 0.6 | 0.3 | 22.0 | 18.2 |
| Lane LOS | A | A | C | C |
| Approach Delay (s) | 0.6 | 0.3 | 22.0 | 18.2 |
| Approach LOS | | | C | C |

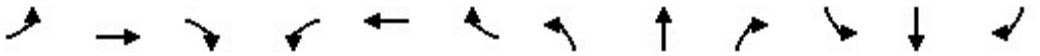
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.2 | | | |
| Intersection Capacity Utilization | 42.0% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 37 | 39 | 34 | 132 | 86 | 22 |
| Future Volume (Veh/h) | 37 | 39 | 34 | 132 | 86 | 22 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 40 | 42 | 37 | 143 | 93 | 24 |
| 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 | 180 | | | | 230 | 108 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 180 | | | | 230 | 108 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 87 | 97 |
| cM capacity (veh/h) | 1396 | | | | 736 | 945 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 82 | 180 | 117 |
| Volume Left | 40 | 0 | 93 |
| Volume Right | 0 | 143 | 24 |
| cSH | 1396 | 1700 | 771 |
| Volume to Capacity | 0.03 | 0.11 | 0.15 |
| Queue Length 95th (m) | 0.7 | 0.0 | 4.1 |
| Control Delay (s) | 3.8 | 0.0 | 10.5 |
| Lane LOS | A | | B |
| Approach Delay (s) | 3.8 | 0.0 | 10.5 |
| Approach LOS | | | B |

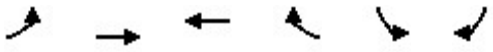
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 4.1 | |
| Intersection Capacity Utilization | | 30.1% | ICU Level of Service |
| Analysis Period (min) | | 15 | |



| 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 | 10 | 2 | 34 | 7 | 2 | 6 | 17 | 73 | 0 | 7 | 0 |
| Future Volume (vph) | 0 | 10 | 2 | 34 | 7 | 2 | 6 | 17 | 73 | 0 | 7 | 0 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 0 | 14 | 3 | 49 | 10 | 3 | 9 | 24 | 104 | 0 | 10 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 17 | 62 | 137 | 10 |
| Volume Left (vph) | 0 | 49 | 9 | 0 |
| Volume Right (vph) | 3 | 3 | 104 | 0 |
| Hadj (s) | -0.11 | 0.13 | -0.40 | 0.00 |
| Departure Headway (s) | 4.1 | 4.3 | 3.7 | 4.2 |
| Degree Utilization, x | 0.02 | 0.07 | 0.14 | 0.01 |
| Capacity (veh/h) | 829 | 800 | 946 | 831 |
| Control Delay (s) | 7.2 | 7.7 | 7.3 | 7.2 |
| Approach Delay (s) | 7.2 | 7.7 | 7.3 | 7.2 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 7.4 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 28.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 375 | 376 | 114 | 61 | 5 |
| Future Volume (Veh/h) | 5 | 375 | 376 | 114 | 61 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 6 | 426 | 427 | 130 | 69 | 6 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 579 | | | | 952 | 514 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 579 | | | | 952 | 514 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 75 | 99 |
| cM capacity (veh/h) | 978 | | | | 281 | 549 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 432 | 557 | 75 |
| Volume Left | 6 | 0 | 69 |
| Volume Right | 0 | 130 | 6 |
| cSH | 978 | 1700 | 292 |
| Volume to Capacity | 0.01 | 0.33 | 0.26 |
| Queue Length 95th (m) | 0.1 | 0.0 | 7.6 |
| Control Delay (s) | 0.2 | 0.0 | 21.5 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.2 | 0.0 | 21.5 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.6 | | |
| Intersection Capacity Utilization | 37.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 44 | 48 | 11 | 25 | 22 | 19 |
| Future Volume (Veh/h) | 44 | 48 | 11 | 25 | 22 | 19 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 58 | 63 | 14 | 33 | 29 | 25 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 114 | 30 | | | 47 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 114 | 30 | | | 47 | |
| tC, single (s) | 6.4 | 6.5 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.6 | | | 2.3 | |
| p0 queue free % | 93 | 93 | | | 98 | |
| cM capacity (veh/h) | 871 | 961 | | | 1487 | |

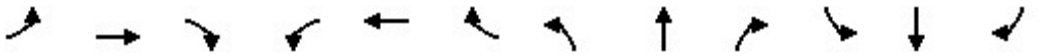
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 121 | 47 | 54 |
| Volume Left | 58 | 0 | 29 |
| Volume Right | 63 | 33 | 0 |
| cSH | 916 | 1700 | 1487 |
| Volume to Capacity | 0.13 | 0.03 | 0.02 |
| Queue Length 95th (m) | 3.5 | 0.0 | 0.5 |
| Control Delay (s) | 9.5 | 0.0 | 4.1 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.5 | 0.0 | 4.1 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.2 | | |
| Intersection Capacity Utilization | 20.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 57 | 127 | 41 | 56 | 44 | 18 |
| Future Volume (Veh/h) | 57 | 127 | 41 | 56 | 44 | 18 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Hourly flow rate (vph) | 76 | 169 | 55 | 75 | 59 | 24 |
| 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 | | | 245 | | 346 | 160 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 245 | | 346 | 160 |
| tC, single (s) | | | 4.1 | | 6.9 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 4.0 | 3.3 |
| p0 queue free % | | | 96 | | 89 | 97 |
| cM capacity (veh/h) | | | 1333 | | 541 | 890 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 245 | 130 | 83 |
| Volume Left | 0 | 55 | 59 |
| Volume Right | 169 | 0 | 24 |
| cSH | 1700 | 1333 | 611 |
| Volume to Capacity | 0.14 | 0.04 | 0.14 |
| Queue Length 95th (m) | 0.0 | 1.0 | 3.6 |
| Control Delay (s) | 0.0 | 3.5 | 11.8 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 3.5 | 11.8 |
| Approach LOS | | | B |

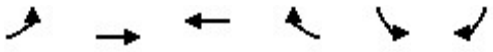
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 29.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 167 | 20 | 42 | 146 | 12 | 13 | 3 | 28 | 14 | 13 | 42 |
| Future Volume (Veh/h) | 20 | 167 | 20 | 42 | 146 | 12 | 13 | 3 | 28 | 14 | 13 | 42 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 24 | 204 | 24 | 51 | 178 | 15 | 16 | 4 | 34 | 17 | 16 | 51 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 193 | | | 228 | | | 612 | 559 | 218 | 590 | 564 | 186 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 193 | | | 228 | | | 612 | 559 | 218 | 590 | 564 | 186 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 98 | | | 95 | | | 95 | 99 | 96 | 95 | 96 | 94 |
| cM capacity (veh/h) | 1279 | | | 1090 | | | 343 | 412 | 766 | 370 | 398 | 860 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 252 | 244 | 54 | 84 |
| Volume Left | 24 | 51 | 16 | 17 |
| Volume Right | 24 | 15 | 34 | 51 |
| cSH | 1279 | 1090 | 536 | 577 |
| Volume to Capacity | 0.02 | 0.05 | 0.10 | 0.15 |
| Queue Length 95th (m) | 0.4 | 1.1 | 2.5 | 3.9 |
| Control Delay (s) | 0.9 | 2.1 | 12.5 | 12.3 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 0.9 | 2.1 | 12.5 | 12.3 |
| Approach LOS | | | B | B |

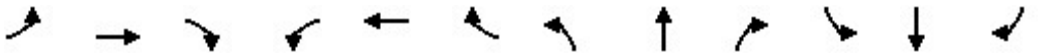
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.9 | | | |
| Intersection Capacity Utilization | 31.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 32 | 298 | 260 | 55 | 115 | 63 |
| Future Volume (Veh/h) | 32 | 298 | 260 | 55 | 115 | 63 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 44 | 414 | 361 | 76 | 160 | 88 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 447 | | | | 912 | 410 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 447 | | | | 912 | 410 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 96 | | | | 41 | 86 |
| cM capacity (veh/h) | 1059 | | | | 269 | 631 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 458 | 437 | 248 |
| Volume Left | 44 | 0 | 160 |
| Volume Right | 0 | 76 | 88 |
| cSH | 1059 | 1700 | 338 |
| Volume to Capacity | 0.04 | 0.26 | 0.73 |
| Queue Length 95th (m) | 1.0 | 0.0 | 42.0 |
| Control Delay (s) | 1.2 | 0.0 | 40.0 |
| Lane LOS | A | | E |
| Approach Delay (s) | 1.2 | 0.0 | 40.0 |
| Approach LOS | | | E |

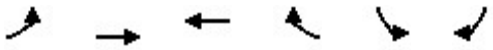
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 9.2 | | |
| Intersection Capacity Utilization | 55.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 13 | 368 | 25 | 9 | 278 | 3 | 43 | 2 | 13 | 80 | 5 | 13 |
| Future Volume (Veh/h) | 13 | 368 | 25 | 9 | 278 | 3 | 43 | 2 | 13 | 80 | 5 | 13 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 17 | 478 | 32 | 12 | 361 | 4 | 56 | 3 | 17 | 104 | 6 | 17 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 372 | | | 516 | | | 944 | 930 | 500 | 940 | 944 | 373 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 372 | | | 516 | | | 944 | 930 | 500 | 940 | 944 | 373 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 74 | 99 | 97 | 53 | 98 | 97 |
| cM capacity (veh/h) | 1190 | | | 1054 | | | 218 | 259 | 537 | 220 | 255 | 671 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 527 | 377 | 76 | 127 |
| Volume Left | 17 | 12 | 56 | 104 |
| Volume Right | 32 | 4 | 17 | 17 |
| cSH | 1190 | 1054 | 253 | 244 |
| Volume to Capacity | 0.01 | 0.01 | 0.30 | 0.52 |
| Queue Length 95th (m) | 0.3 | 0.3 | 9.3 | 20.9 |
| Control Delay (s) | 0.4 | 0.4 | 25.2 | 34.8 |
| Lane LOS | A | A | D | D |
| Approach Delay (s) | 0.4 | 0.4 | 25.2 | 34.8 |
| Approach LOS | | | D | D |

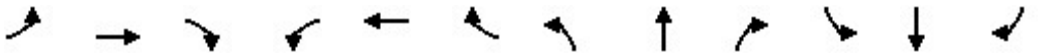
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 6.1 | | | |
| Intersection Capacity Utilization | 40.2% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 15 | 48 | 58 | 38 | 135 | 44 |
| Future Volume (Veh/h) | 15 | 48 | 58 | 38 | 135 | 44 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 16 | 52 | 63 | 41 | 147 | 48 |
| 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 | 104 | | | | 168 | 84 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 104 | | | | 168 | 84 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 82 | 95 |
| cM capacity (veh/h) | 1488 | | | | 814 | 976 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 68 | 104 | 195 |
| Volume Left | 16 | 0 | 147 |
| Volume Right | 0 | 41 | 48 |
| cSH | 1488 | 1700 | 849 |
| Volume to Capacity | 0.01 | 0.06 | 0.23 |
| Queue Length 95th (m) | 0.2 | 0.0 | 6.7 |
| Control Delay (s) | 1.8 | 0.0 | 10.5 |
| Lane LOS | A | | B |
| Approach Delay (s) | 1.8 | 0.0 | 10.5 |
| Approach LOS | | | B |

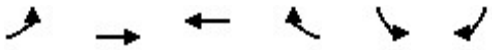
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.9 | | |
| Intersection Capacity Utilization | 26.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 2 | 15 | 2 | 178 | 40 | 2 | 3 | 12 | 74 | 0 | 11 | 2 |
| Future Volume (vph) | 2 | 15 | 2 | 178 | 40 | 2 | 3 | 12 | 74 | 0 | 11 | 2 |
| Peak Hour Factor | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |
| Hourly flow rate (vph) | 3 | 23 | 3 | 274 | 62 | 3 | 5 | 18 | 114 | 0 | 17 | 3 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 29 | 339 | 137 | 20 |
| Volume Left (vph) | 3 | 274 | 5 | 0 |
| Volume Right (vph) | 3 | 3 | 114 | 3 |
| Hadj (s) | -0.04 | 0.16 | -0.47 | 0.07 |
| Departure Headway (s) | 4.6 | 4.5 | 4.3 | 5.0 |
| Degree Utilization, x | 0.04 | 0.42 | 0.16 | 0.03 |
| Capacity (veh/h) | 737 | 780 | 770 | 651 |
| Control Delay (s) | 7.8 | 10.6 | 8.2 | 8.2 |
| Approach Delay (s) | 7.8 | 10.6 | 8.2 | 8.2 |
| Approach LOS | A | B | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 9.7 | | | |
| Level of Service | A | | | |
| Intersection Capacity Utilization | 34.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 4 | 457 | 273 | 106 | 128 | 0 |
| Future Volume (Veh/h) | 4 | 457 | 273 | 106 | 128 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 5 | 557 | 333 | 129 | 156 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 466 | | | | 968 | 402 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 466 | | | | 968 | 402 |
| 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 | | | | 45 | 100 |
| cM capacity (veh/h) | 1101 | | | | 281 | 650 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 562 | 462 | 156 |
| Volume Left | 5 | 0 | 156 |
| Volume Right | 0 | 129 | 0 |
| cSH | 1101 | 1700 | 281 |
| Volume to Capacity | 0.00 | 0.27 | 0.55 |
| Queue Length 95th (m) | 0.1 | 0.0 | 23.7 |
| Control Delay (s) | 0.1 | 0.0 | 32.7 |
| Lane LOS | A | | D |
| Approach Delay (s) | 0.1 | 0.0 | 32.7 |
| Approach LOS | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.4 | | |
| Intersection Capacity Utilization | 41.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 37 | 41 | 26 | 52 | 58 | 19 |
| Future Volume (Veh/h) | 37 | 41 | 26 | 52 | 58 | 19 |
| 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) | 46 | 51 | 32 | 65 | 72 | 24 |
| 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 | 232 | 64 | | | 97 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 232 | 64 | | | 97 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 94 | 95 | | | 95 | |
| cM capacity (veh/h) | 724 | 1005 | | | 1509 | |

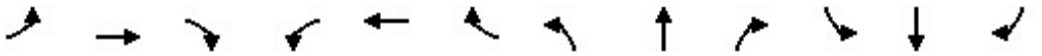
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 97 | 97 | 96 |
| Volume Left | 46 | 0 | 72 |
| Volume Right | 51 | 65 | 0 |
| cSH | 849 | 1700 | 1509 |
| Volume to Capacity | 0.11 | 0.06 | 0.05 |
| Queue Length 95th (m) | 2.9 | 0.0 | 1.1 |
| Control Delay (s) | 9.8 | 0.0 | 5.7 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.8 | 0.0 | 5.7 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 5.2 | |
| Intersection Capacity Utilization | | 22.1% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 79 | 83 | 22 | 75 | 128 | 31 |
| Future Volume (Veh/h) | 79 | 83 | 22 | 75 | 128 | 31 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 89 | 93 | 25 | 84 | 144 | 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 | | | 182 | | 270 | 136 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 182 | | 270 | 136 |
| tC, single (s) | | | 4.1 | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.6 | 3.3 |
| p0 queue free % | | | 98 | | 79 | 96 |
| cM capacity (veh/h) | | | 1405 | | 682 | 919 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 182 | 109 | 179 |
| Volume Left | 0 | 25 | 144 |
| Volume Right | 93 | 0 | 35 |
| cSH | 1700 | 1405 | 719 |
| Volume to Capacity | 0.11 | 0.02 | 0.25 |
| Queue Length 95th (m) | 0.0 | 0.4 | 7.5 |
| Control Delay (s) | 0.0 | 1.9 | 11.7 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 1.9 | 11.7 |
| Approach LOS | | | B |

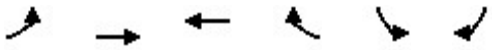
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.9 | | |
| Intersection Capacity Utilization | 33.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 52 | 200 | 17 | 38 | 209 | 11 | 26 | 17 | 45 | 11 | 10 | 35 |
| Future Volume (Veh/h) | 52 | 200 | 17 | 38 | 209 | 11 | 26 | 17 | 45 | 11 | 10 | 35 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 55 | 211 | 18 | 40 | 220 | 12 | 27 | 18 | 47 | 12 | 11 | 37 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 235 | | | 230 | | | 680 | 646 | 224 | 698 | 649 | 229 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 235 | | | 230 | | | 680 | 646 | 224 | 698 | 649 | 229 |
| tC, single (s) | 4.2 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 96 | | | 97 | | | 91 | 95 | 94 | 96 | 97 | 95 |
| cM capacity (veh/h) | 1260 | | | 1169 | | | 315 | 345 | 785 | 301 | 360 | 781 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 284 | 272 | 92 | 60 |
| Volume Left | 55 | 40 | 27 | 12 |
| Volume Right | 18 | 12 | 47 | 37 |
| cSH | 1260 | 1169 | 465 | 509 |
| Volume to Capacity | 0.04 | 0.03 | 0.20 | 0.12 |
| Queue Length 95th (m) | 1.0 | 0.8 | 5.5 | 3.0 |
| Control Delay (s) | 1.9 | 1.5 | 14.6 | 13.0 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 1.9 | 1.5 | 14.6 | 13.0 |
| Approach LOS | | | B | B |

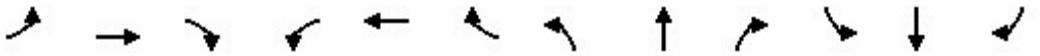
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 4.3 | | | |
| Intersection Capacity Utilization | 36.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 40 | 299 | 280 | 121 | 84 | 46 |
| Future Volume (Veh/h) | 40 | 299 | 280 | 121 | 84 | 46 |
| 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) | 42 | 315 | 295 | 127 | 88 | 48 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 428 | | | | 766 | 366 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 428 | | | | 766 | 366 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 96 | | | | 75 | 93 |
| cM capacity (veh/h) | 1134 | | | | 349 | 677 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 357 | 422 | 136 |
| Volume Left | 42 | 0 | 88 |
| Volume Right | 0 | 127 | 48 |
| cSH | 1134 | 1700 | 421 |
| Volume to Capacity | 0.04 | 0.25 | 0.32 |
| Queue Length 95th (m) | 0.9 | 0.0 | 10.5 |
| Control Delay (s) | 1.3 | 0.0 | 17.6 |
| Lane LOS | A | | C |
| Approach Delay (s) | 1.3 | 0.0 | 17.6 |
| Approach LOS | | | C |

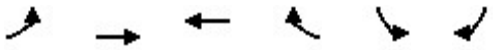
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 58.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 18 | 350 | 43 | 10 | 371 | 4 | 23 | 7 | 18 | 57 | 3 | 11 |
| Future Volume (Veh/h) | 18 | 350 | 43 | 10 | 371 | 4 | 23 | 7 | 18 | 57 | 3 | 11 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 20 | 389 | 48 | 11 | 412 | 4 | 26 | 8 | 20 | 63 | 3 | 12 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 434 | | | 454 | | | 924 | 926 | 437 | 938 | 948 | 436 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 434 | | | 454 | | | 924 | 926 | 437 | 938 | 948 | 436 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 86 | 97 | 97 | 71 | 99 | 98 |
| cM capacity (veh/h) | 1082 | | | 1035 | | | 188 | 255 | 596 | 217 | 247 | 612 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 457 | 427 | 54 | 78 |
| Volume Left | 20 | 11 | 26 | 63 |
| Volume Right | 48 | 4 | 20 | 12 |
| cSH | 1082 | 1035 | 266 | 242 |
| Volume to Capacity | 0.02 | 0.01 | 0.20 | 0.32 |
| Queue Length 95th (m) | 0.4 | 0.2 | 5.7 | 10.2 |
| Control Delay (s) | 0.6 | 0.3 | 22.0 | 26.7 |
| Lane LOS | A | A | C | D |
| Approach Delay (s) | 0.6 | 0.3 | 22.0 | 26.7 |
| Approach LOS | | | C | D |

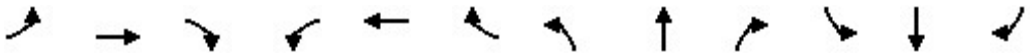
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.6 | | | |
| Intersection Capacity Utilization | 43.7% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 50 | 75 | 56 | 132 | 86 | 30 |
| Future Volume (Veh/h) | 50 | 75 | 56 | 132 | 86 | 30 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 54 | 82 | 61 | 143 | 93 | 33 |
| 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 | 204 | | | | 322 | 132 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 204 | | | | 322 | 132 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 96 | | | | 86 | 96 |
| cM capacity (veh/h) | 1368 | | | | 645 | 917 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 136 | 204 | 126 |
| Volume Left | 54 | 0 | 93 |
| Volume Right | 0 | 143 | 33 |
| cSH | 1368 | 1700 | 699 |
| Volume to Capacity | 0.04 | 0.12 | 0.18 |
| Queue Length 95th (m) | 0.9 | 0.0 | 5.0 |
| Control Delay (s) | 3.3 | 0.0 | 11.3 |
| Lane LOS | A | | B |
| Approach Delay (s) | 3.3 | 0.0 | 11.3 |
| Approach LOS | | | B |

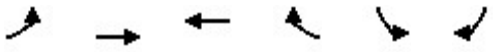
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 34.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 46 | 2 | 122 | 29 | 2 | 6 | 17 | 218 | 0 | 7 | 0 |
| Future Volume (vph) | 0 | 46 | 2 | 122 | 29 | 2 | 6 | 17 | 218 | 0 | 7 | 0 |
| Peak Hour Factor | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| Hourly flow rate (vph) | 0 | 66 | 3 | 174 | 41 | 3 | 9 | 24 | 311 | 0 | 10 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 69 | 218 | 344 | 10 |
| Volume Left (vph) | 0 | 174 | 9 | 0 |
| Volume Right (vph) | 3 | 3 | 311 | 0 |
| Hadj (s) | -0.03 | 0.15 | -0.52 | 0.00 |
| Departure Headway (s) | 5.0 | 4.9 | 4.1 | 5.0 |
| Degree Utilization, x | 0.09 | 0.30 | 0.39 | 0.01 |
| Capacity (veh/h) | 659 | 684 | 831 | 645 |
| Control Delay (s) | 8.5 | 10.0 | 9.8 | 8.1 |
| Approach Delay (s) | 8.5 | 10.0 | 9.8 | 8.1 |
| Approach LOS | A | B | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 9.7 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 42.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 419 | 376 | 259 | 105 | 5 |
| Future Volume (Veh/h) | 5 | 419 | 376 | 259 | 105 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 6 | 476 | 427 | 294 | 119 | 6 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 743 | | | | 1084 | 596 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 743 | | | | 1084 | 596 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 49 | 99 |
| cM capacity (veh/h) | 850 | | | | 234 | 494 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 482 | 721 | 125 |
| Volume Left | 6 | 0 | 119 |
| Volume Right | 0 | 294 | 6 |
| cSH | 850 | 1700 | 240 |
| Volume to Capacity | 0.01 | 0.42 | 0.52 |
| Queue Length 95th (m) | 0.2 | 0.0 | 20.8 |
| Control Delay (s) | 0.2 | 0.0 | 35.2 |
| Lane LOS | A | | E |
| Approach Delay (s) | 0.2 | 0.0 | 35.2 |
| Approach LOS | | | E |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 48.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 11 | 22 | 7 | 9 | 16 |
| Future Volume (vph) | 9 | 11 | 22 | 7 | 9 | 16 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 3.5 | 3.3 | 3.5 | 3.5 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.924 | | 0.967 | | | |
| Flt Protected | 0.978 | | | | | 0.983 |
| Satd. Flow (prot) | 1946 | 0 | 1776 | 0 | 0 | 1738 |
| Flt Permitted | 0.978 | | | | | 0.983 |
| Satd. Flow (perm) | 1946 | 0 | 1776 | 0 | 0 | 1738 |
| Link Speed (k/h) | 40 | | 40 | | | 40 |
| Link Distance (m) | 456.0 | | 590.7 | | | 1083.8 |
| Travel Time (s) | 41.0 | | 53.2 | | | 97.5 |
| Lane Group Flow (vph) | 25 | 0 | 37 | 0 | 0 | 31 |
| Sign Control | Stop | | Free | | | Free |

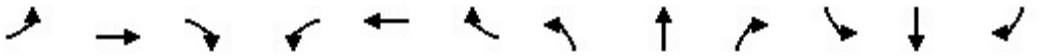
| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 19 | 11 | 10 | 20 | 7 | 11 |
| Future Volume (vph) | 19 | 11 | 10 | 20 | 7 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.1 | 3.5 | 3.5 | 3.1 | 4.5 | 3.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.951 | | | | 0.919 | |
| Flt Protected | | | | 0.984 | 0.980 | |
| Satd. Flow (prot) | 1544 | 0 | 0 | 1645 | 1782 | 0 |
| Flt Permitted | | | | 0.984 | 0.980 | |
| Satd. Flow (perm) | 1544 | 0 | 0 | 1645 | 1782 | 0 |
| Link Speed (k/h) | 40 | | | 40 | 40 | |
| Link Distance (m) | 263.8 | | | 381.2 | 411.0 | |
| Travel Time (s) | 23.7 | | | 34.3 | 37.0 | |
| Lane Group Flow (vph) | 33 | 0 | 0 | 33 | 20 | 0 |
| Sign Control | Free | | | Free | Stop | |

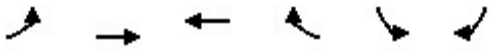
| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized



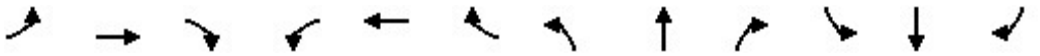
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 7 | 103 | 14 | 32 | 133 | 9 | 22 | 14 | 38 | 9 | 8 | 8 |
| Future Volume (vph) | 7 | 103 | 14 | 32 | 133 | 9 | 22 | 14 | 38 | 9 | 8 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 |
| 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 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.984 | | | 0.993 | | | 0.931 | | | 0.957 | |
| Flt Protected | | 0.997 | | | 0.991 | | | 0.985 | | | 0.982 | |
| Satd. Flow (prot) | 0 | 2014 | 0 | 0 | 1924 | 0 | 0 | 1782 | 0 | 0 | 1943 | 0 |
| Flt Permitted | | 0.997 | | | 0.991 | | | 0.985 | | | 0.982 | |
| Satd. Flow (perm) | 0 | 2014 | 0 | 0 | 1924 | 0 | 0 | 1782 | 0 | 0 | 1943 | 0 |
| Link Speed (k/h) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (m) | | 788.4 | | | 805.6 | | | 914.0 | | | 590.7 | |
| Travel Time (s) | | 71.0 | | | 72.5 | | | 82.3 | | | 53.2 | |
| Lane Group Flow (vph) | 0 | 130 | 0 | 0 | 183 | 0 | 0 | 78 | 0 | 0 | 25 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |



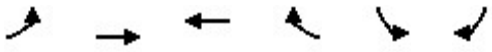
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 12 | 192 | 196 | 8 | 16 | 26 |
| Future Volume (vph) | 12 | 192 | 196 | 8 | 16 | 26 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 3.5 | 3.5 | 3.5 | 4.8 | 3.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | | 0.995 | | 0.917 | |
| Flt Protected | | 0.997 | | | 0.981 | |
| Satd. Flow (prot) | 0 | 1773 | 1720 | 0 | 1893 | 0 |
| Flt Permitted | | 0.997 | | | 0.981 | |
| Satd. Flow (perm) | 0 | 1773 | 1720 | 0 | 1893 | 0 |
| Link Speed (k/h) | | 40 | 40 | | 40 | |
| Link Distance (m) | | 805.6 | 354.8 | | 411.0 | |
| Travel Time (s) | | 72.5 | 31.9 | | 37.0 | |
| Lane Group Flow (vph) | 0 | 215 | 214 | 0 | 44 | 0 |
| Sign Control | | Free | Free | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |



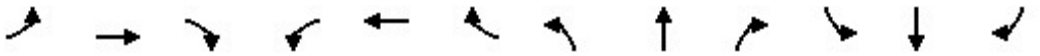
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 207 | 9 | 8 | 197 | 2 | 2 | 6 | 15 | 11 | 2 | 8 |
| Future Volume (vph) | 14 | 207 | 9 | 8 | 197 | 2 | 2 | 6 | 15 | 11 | 2 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 3.8 | 3.5 | 3.5 | 3.8 | 3.5 | 3.5 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 |
| 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 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.995 | | | 0.999 | | | 0.912 | | | 0.947 | |
| Flt Protected | | 0.997 | | | 0.998 | | | 0.996 | | | 0.975 | |
| Satd. Flow (prot) | 0 | 1732 | 0 | 0 | 1730 | 0 | 0 | 1574 | 0 | 0 | 1735 | 0 |
| Flt Permitted | | 0.997 | | | 0.998 | | | 0.996 | | | 0.975 | |
| Satd. Flow (perm) | 0 | 1732 | 0 | 0 | 1730 | 0 | 0 | 1574 | 0 | 0 | 1735 | 0 |
| Link Speed (k/h) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (m) | | 354.8 | | | 155.5 | | | 122.8 | | | 292.8 | |
| Travel Time (s) | | 31.9 | | | 14.0 | | | 11.1 | | | 26.4 | |
| Lane Group Flow (vph) | 0 | 256 | 0 | 0 | 230 | 0 | 0 | 26 | 0 | 0 | 23 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |



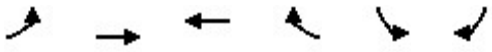
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 1842 | 1842 | 0 | 1842 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 1842 | 1842 | 0 | 1842 | 0 |
| Link Speed (k/h) | | 40 | 40 | | 40 | |
| Link Distance (m) | | 456.0 | 263.8 | | 80.1 | |
| Travel Time (s) | | 41.0 | 23.7 | | 7.2 | |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 5 | 1 | 18 | 4 | 1 | 5 | 14 | 39 | 0 | 6 | 0 |
| Future Volume (vph) | 0 | 5 | 1 | 18 | 4 | 1 | 5 | 14 | 39 | 0 | 6 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 4.4 | 3.5 | 3.5 | 4.4 | 3.5 | 3.5 | 4.3 | 3.5 | 3.5 | 4.3 | 3.5 |
| 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 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.983 | | | 0.996 | | | 0.909 | | | | |
| Flt Protected | | | | | 0.962 | | | 0.996 | | | | |
| Satd. Flow (prot) | 0 | 2034 | 0 | 0 | 1982 | 0 | 0 | 1793 | 0 | 0 | 2048 | 0 |
| Flt Permitted | | | | | 0.962 | | | 0.996 | | | | |
| Satd. Flow (perm) | 0 | 2034 | 0 | 0 | 1982 | 0 | 0 | 1793 | 0 | 0 | 2048 | 0 |
| Link Speed (k/h) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (m) | | 109.8 | | | 83.2 | | | 292.8 | | | 179.2 | |
| Travel Time (s) | | 9.9 | | | 7.5 | | | 26.4 | | | 16.1 | |
| Lane Group Flow (vph) | 0 | 8 | 0 | 0 | 33 | 0 | 0 | 83 | 0 | 0 | 9 | 0 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |



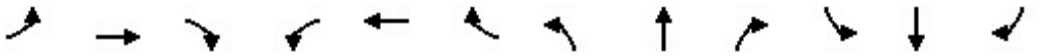
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 3 | 229 | 201 | 76 | 42 | 3 |
| Future Volume (vph) | 3 | 229 | 201 | 76 | 42 | 3 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 3.8 | 3.8 | 3.5 | 4.8 | 3.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | | 0.963 | | 0.992 | |
| Flt Protected | | 0.999 | | | 0.955 | |
| Satd. Flow (prot) | 0 | 1782 | 1726 | 0 | 2040 | 0 |
| Flt Permitted | | 0.999 | | | 0.955 | |
| Satd. Flow (perm) | 0 | 1782 | 1726 | 0 | 2040 | 0 |
| Link Speed (k/h) | | 40 | 40 | | 40 | |
| Link Distance (m) | | 155.5 | 320.4 | | 154.4 | |
| Travel Time (s) | | 14.0 | 28.8 | | 13.9 | |
| Lane Group Flow (vph) | 0 | 263 | 314 | 0 | 51 | 0 |
| Sign Control | | Free | Free | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 23 | 27 | 27 | 17 | 15 | 118 |
| Future Volume (Veh/h) | 23 | 27 | 27 | 17 | 15 | 118 |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Peak Hour Factor | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Hourly flow rate (vph) | 30 | 36 | 36 | 22 | 20 | 155 |
| 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 | 242 | 47 | | | 58 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 242 | 47 | | | 58 | |
| tC, single (s) | 6.4 | 6.5 | | | 4.2 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.6 | | | 2.3 | |
| p0 queue free % | 96 | 96 | | | 99 | |
| cM capacity (veh/h) | 741 | 941 | | | 1473 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 66 | 58 | 175 |
| Volume Left | 30 | 0 | 20 |
| Volume Right | 36 | 22 | 0 |
| cSH | 838 | 1700 | 1473 |
| Volume to Capacity | 0.08 | 0.03 | 0.01 |
| Queue Length 95th (m) | 1.9 | 0.0 | 0.3 |
| Control Delay (s) | 9.7 | 0.0 | 1.0 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.7 | 0.0 | 1.0 |
| Approach LOS | A | | |

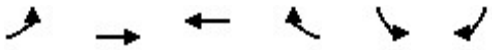
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.7 | | |
| Intersection Capacity Utilization | 23.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 127 | 104 | 121 | 124 | 9 | 72 | 22 | 45 | 10 | 117 | 21 |
| Future Volume (Veh/h) | 12 | 127 | 104 | 121 | 124 | 9 | 72 | 22 | 45 | 10 | 117 | 21 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 15 | 155 | 127 | 148 | 151 | 11 | 88 | 27 | 55 | 12 | 143 | 26 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 162 | | | 282 | | | 800 | 706 | 220 | 772 | 764 | 158 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 162 | | | 282 | | | 800 | 706 | 220 | 772 | 764 | 158 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 99 | | | 86 | | | 42 | 91 | 93 | 95 | 48 | 97 |
| cM capacity (veh/h) | 1314 | | | 1037 | | | 151 | 307 | 763 | 236 | 276 | 892 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 297 | 310 | 170 | 181 |
| Volume Left | 15 | 148 | 88 | 12 |
| Volume Right | 127 | 11 | 55 | 26 |
| cSH | 1314 | 1037 | 229 | 302 |
| Volume to Capacity | 0.01 | 0.14 | 0.74 | 0.60 |
| Queue Length 95th (m) | 0.3 | 3.8 | 38.7 | 27.4 |
| Control Delay (s) | 0.5 | 5.1 | 55.3 | 33.2 |
| Lane LOS | A | A | F | D |
| Approach Delay (s) | 0.5 | 5.1 | 55.3 | 33.2 |
| Approach LOS | | | F | D |

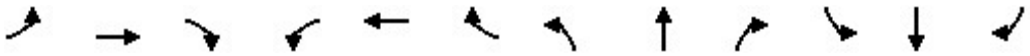
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 17.9 | | | |
| Intersection Capacity Utilization | 57.3% | ICU Level of Service | B | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 28 | 276 | 314 | 55 | 115 | 53 |
| Future Volume (Veh/h) | 28 | 276 | 314 | 55 | 115 | 53 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 39 | 383 | 436 | 76 | 160 | 74 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 522 | | | | 946 | 485 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 522 | | | | 946 | 485 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 96 | | | | 38 | 87 |
| cM capacity (veh/h) | 993 | | | | 258 | 572 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 422 | 512 | 234 |
| Volume Left | 39 | 0 | 160 |
| Volume Right | 0 | 76 | 74 |
| cSH | 993 | 1700 | 312 |
| Volume to Capacity | 0.04 | 0.30 | 0.75 |
| Queue Length 95th (m) | 0.9 | 0.0 | 43.3 |
| Control Delay (s) | 1.2 | 0.0 | 44.4 |
| Lane LOS | A | | E |
| Approach Delay (s) | 1.2 | 0.0 | 44.4 |
| Approach LOS | | | E |

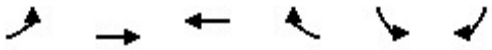
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 9.3 | | |
| Intersection Capacity Utilization | 54.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 13 | 346 | 25 | 9 | 332 | 3 | 43 | 2 | 13 | 17 | 5 | 13 |
| Future Volume (Veh/h) | 13 | 346 | 25 | 9 | 332 | 3 | 43 | 2 | 13 | 17 | 5 | 13 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 17 | 449 | 32 | 12 | 431 | 4 | 56 | 3 | 17 | 22 | 6 | 17 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 442 | | | 487 | | | 985 | 971 | 471 | 982 | 985 | 443 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 442 | | | 487 | | | 985 | 971 | 471 | 982 | 985 | 443 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 72 | 99 | 97 | 89 | 98 | 97 |
| cM capacity (veh/h) | 1122 | | | 1081 | | | 204 | 245 | 558 | 207 | 241 | 613 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 498 | 447 | 76 | 45 |
| Volume Left | 17 | 12 | 56 | 22 |
| Volume Right | 32 | 4 | 17 | 17 |
| cSH | 1122 | 1081 | 239 | 283 |
| Volume to Capacity | 0.02 | 0.01 | 0.32 | 0.16 |
| Queue Length 95th (m) | 0.4 | 0.3 | 10.0 | 4.2 |
| Control Delay (s) | 0.5 | 0.3 | 26.9 | 20.1 |
| Lane LOS | A | A | D | C |
| Approach Delay (s) | 0.5 | 0.3 | 26.9 | 20.1 |
| Approach LOS | | | D | C |

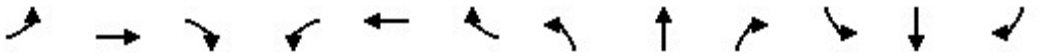
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.1 | | | |
| Intersection Capacity Utilization | 37.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



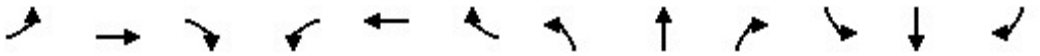
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 4 | 371 | 326 | 60 | 65 | 0 |
| Future Volume (Veh/h) | 4 | 371 | 326 | 60 | 65 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 5 | 452 | 398 | 73 | 79 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 475 | | | | 900 | 438 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 475 | | | | 900 | 438 |
| 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 | | | | 74 | 100 |
| cM capacity (veh/h) | 1092 | | | | 308 | 620 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 457 | 471 | 79 |
| Volume Left | 5 | 0 | 79 |
| Volume Right | 0 | 73 | 0 |
| cSH | 1092 | 1700 | 308 |
| Volume to Capacity | 0.00 | 0.28 | 0.26 |
| Queue Length 95th (m) | 0.1 | 0.0 | 7.6 |
| Control Delay (s) | 0.1 | 0.0 | 20.6 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.1 | 0.0 | 20.6 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.7 | | |
| Intersection Capacity Utilization | 33.0% | 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) | 28 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 20 |
| Future Volume (vph) | 28 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | 15.0 | | 15.0 | 0.0 | | 0.0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.99 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.928 | | | 0.996 | | | 0.970 | | | 0.950 | |
| Flt Protected | | 0.997 | | | 0.987 | | | 0.974 | | | 0.994 | |
| Satd. Flow (prot) | 0 | 1854 | 0 | 0 | 1883 | 0 | 0 | 1857 | 0 | 0 | 1940 | 0 |
| Flt Permitted | | 0.970 | | | 0.835 | | | 0.802 | | | 0.939 | |
| Satd. Flow (perm) | 0 | 1803 | 0 | 0 | 1593 | 0 | 0 | 1529 | 0 | 0 | 1833 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 141 | | | 4 | | | 33 | | | 21 | |
| Link Speed (k/h) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (m) | | 788.4 | | | 805.6 | | | 914.0 | | | 590.7 | |
| Travel Time (s) | | 71.0 | | | 72.5 | | | 82.3 | | | 53.2 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 1 | | | 3 | 3 | | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 14% | 4% | 7% | 34% | 5% | 0% | 5% | 14% | 13% | 0% | 0% | 13% |
| Adj. Flow (vph) | 29 | 173 | 229 | 62 | 171 | 7 | 246 | 113 | 101 | 7 | 29 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 431 | 0 | 0 | 240 | 0 | 0 | 460 | 0 | 0 | 57 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (m) | 6.1 | 30.5 | | 6.1 | 30.5 | | 6.1 | 30.5 | | 6.1 | 30.5 | |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Size(m) | 6.1 | 1.8 | | 6.1 | 1.8 | | 6.1 | 1.8 | | 6.1 | 1.8 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 28.7 | | | 28.7 | | | 28.7 | | | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 26.0 | 26.0 | | 26.0 | 26.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (s) | 26.0 | 26.0 | | 26.0 | 26.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 52.0% | 52.0% | | 52.0% | 52.0% | | 48.0% | 48.0% | | 48.0% | 48.0% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | Min | Min | | Min | Min | | None | None | | None | None | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 20.3 | | | 20.3 | | | 16.6 | | | 16.6 | |
| Actuated g/C Ratio | | 0.43 | | | 0.43 | | | 0.35 | | | 0.35 | |
| v/c Ratio | | 0.50 | | | 0.35 | | | 0.82 | | | 0.09 | |
| Control Delay | | 9.3 | | | 11.4 | | | 27.2 | | | 7.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 9.3 | | | 11.4 | | | 27.2 | | | 7.5 | |
| LOS | | A | | | B | | | C | | | A | |
| Approach Delay | | 9.3 | | | 11.4 | | | 27.2 | | | 7.5 | |
| Approach LOS | | A | | | B | | | C | | | A | |
| Queue Length 50th (m) | | 16.8 | | | 13.5 | | | 30.4 | | | 1.9 | |
| Queue Length 95th (m) | | 35.8 | | | 26.5 | | | #72.9 | | | 7.1 | |
| Internal Link Dist (m) | | 764.4 | | | 781.6 | | | 890.0 | | | 566.7 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 887 | | | 718 | | | 641 | | | 757 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.49 | | | 0.33 | | | 0.72 | | | 0.08 | |

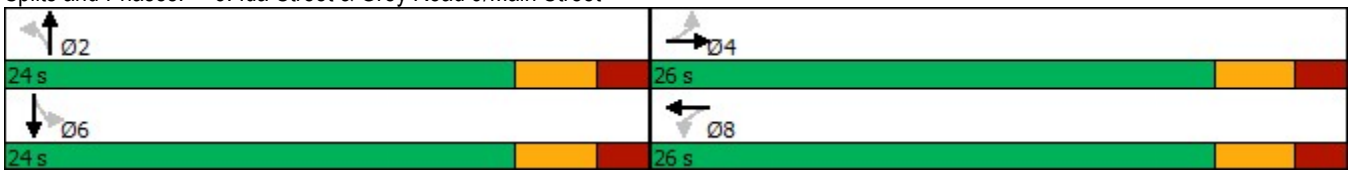
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 50 | | | |
| Actuated Cycle Length: 47 | | | |
| Natural Cycle: 55 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.82 | | | |
| Intersection Signal Delay: 16.6 | | Intersection LOS: B | |

Intersection Capacity Utilization 68.3% ICU Level of Service C

Analysis Period (min) 15

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

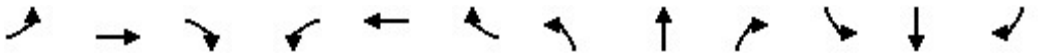
Splits and Phases: 3: Ida Street & Grey Road 9/Main Street



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 26 | 113 | 28 | 33 | 34 |
| Future Volume (Veh/h) | 22 | 26 | 113 | 28 | 33 | 34 |
| 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) | 28 | 32 | 141 | 35 | 41 | 42 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 282 | 158 | | | 176 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 282 | 158 | | | 176 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 96 | 96 | | | 97 | |
| cM capacity (veh/h) | 691 | 892 | | | 1412 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 60 | 176 | 83 |
| Volume Left | 28 | 0 | 41 |
| Volume Right | 32 | 35 | 0 |
| cSH | 786 | 1700 | 1412 |
| Volume to Capacity | 0.08 | 0.10 | 0.03 |
| Queue Length 95th (m) | 1.9 | 0.0 | 0.7 |
| Control Delay (s) | 10.0 | 0.0 | 3.9 |
| Lane LOS | A | | A |
| Approach Delay (s) | 10.0 | 0.0 | 3.9 |
| Approach LOS | A | | |

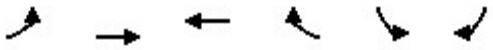
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 2.9 | |
| Intersection Capacity Utilization | | 24.6% | ICU Level of Service |
| Analysis Period (min) | | 15 | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 28 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 20 |
| Future Volume (Veh/h) | 28 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 20 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 29 | 173 | 229 | 62 | 171 | 7 | 246 | 113 | 101 | 7 | 29 | 21 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 181 | | | 403 | | | 680 | 652 | 292 | 808 | 762 | 178 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 181 | | | 403 | | | 680 | 652 | 292 | 808 | 762 | 178 |
| tC, single (s) | 4.2 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 98 | | | 94 | | | 19 | 67 | 86 | 96 | 91 | 97 |
| cM capacity (veh/h) | 1320 | | | 1001 | | | 304 | 340 | 719 | 179 | 308 | 835 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 431 | 240 | 460 | 57 |
| Volume Left | 29 | 62 | 246 | 7 |
| Volume Right | 229 | 7 | 101 | 21 |
| cSH | 1320 | 1001 | 359 | 360 |
| Volume to Capacity | 0.02 | 0.06 | 1.28 | 0.16 |
| Queue Length 95th (m) | 0.5 | 1.5 | 158.6 | 4.2 |
| Control Delay (s) | 0.7 | 2.7 | 177.0 | 16.9 |
| Lane LOS | A | A | F | C |
| Approach Delay (s) | 0.7 | 2.7 | 177.0 | 16.9 |
| Approach LOS | | | F | C |

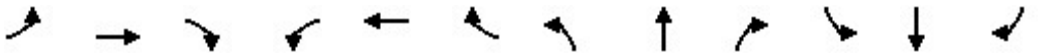
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 70.2 | | | |
| Intersection Capacity Utilization | 66.6% | ICU Level of Service | C | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 28 | 314 | 251 | 121 | 84 | 39 |
| Future Volume (Veh/h) | 28 | 314 | 251 | 121 | 84 | 39 |
| 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) | 29 | 331 | 264 | 127 | 88 | 41 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 397 | | | | 724 | 336 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 397 | | | | 724 | 336 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 98 | | | | 76 | 94 |
| cM capacity (veh/h) | 1164 | | | | 373 | 705 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 360 | 391 | 129 |
| Volume Left | 29 | 0 | 88 |
| Volume Right | 0 | 127 | 41 |
| cSH | 1164 | 1700 | 439 |
| Volume to Capacity | 0.02 | 0.23 | 0.29 |
| Queue Length 95th (m) | 0.6 | 0.0 | 9.2 |
| Control Delay (s) | 0.9 | 0.0 | 16.6 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.9 | 0.0 | 16.6 |
| Approach LOS | | | C |

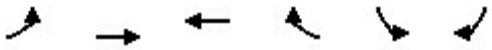
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.8 | | |
| Intersection Capacity Utilization | 53.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 18 | 365 | 43 | 10 | 342 | 4 | 23 | 7 | 18 | 13 | 3 | 11 |
| Future Volume (Veh/h) | 18 | 365 | 43 | 10 | 342 | 4 | 23 | 7 | 18 | 13 | 3 | 11 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 20 | 406 | 48 | 11 | 380 | 4 | 26 | 8 | 20 | 14 | 3 | 12 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 402 | | | 471 | | | 908 | 911 | 454 | 923 | 933 | 404 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 402 | | | 471 | | | 908 | 911 | 454 | 923 | 933 | 404 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 87 | 97 | 97 | 94 | 99 | 98 |
| cM capacity (veh/h) | 1112 | | | 1020 | | | 193 | 260 | 583 | 222 | 253 | 638 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 474 | 395 | 54 | 29 |
| Volume Left | 20 | 11 | 26 | 14 |
| Volume Right | 48 | 4 | 20 | 12 |
| cSH | 1112 | 1020 | 270 | 310 |
| Volume to Capacity | 0.02 | 0.01 | 0.20 | 0.09 |
| Queue Length 95th (m) | 0.4 | 0.2 | 5.5 | 2.3 |
| Control Delay (s) | 0.5 | 0.4 | 21.6 | 17.8 |
| Lane LOS | A | A | C | C |
| Approach Delay (s) | 0.5 | 0.4 | 21.6 | 17.8 |
| Approach LOS | | | C | C |

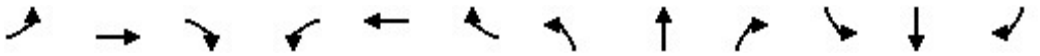
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.2 | | | |
| Intersection Capacity Utilization | 42.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



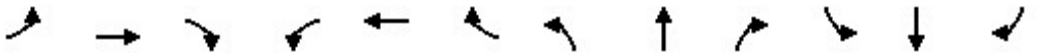
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 6 | 390 | 347 | 114 | 61 | 5 |
| Future Volume (Veh/h) | 6 | 390 | 347 | 114 | 61 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 7 | 443 | 394 | 130 | 69 | 6 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 546 | | | | 938 | 481 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 546 | | | | 938 | 481 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 76 | 99 |
| cM capacity (veh/h) | 1006 | | | | 286 | 573 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 450 | 524 | 75 |
| Volume Left | 7 | 0 | 69 |
| Volume Right | 0 | 130 | 6 |
| cSH | 1006 | 1700 | 298 |
| Volume to Capacity | 0.01 | 0.31 | 0.25 |
| Queue Length 95th (m) | 0.2 | 0.0 | 7.4 |
| Control Delay (s) | 0.2 | 0.0 | 21.1 |
| Lane LOS | A | | C |
| Approach Delay (s) | 0.2 | 0.0 | 21.1 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.6 | | |
| Intersection Capacity Utilization | 35.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 127 | 104 | 121 | 124 | 9 | 72 | 22 | 45 | 10 | 117 | 42 |
| Future Volume (vph) | 20 | 127 | 104 | 121 | 124 | 9 | 72 | 22 | 45 | 10 | 117 | 42 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | 15.0 | | 15.0 | 0.0 | | 0.0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | 0.99 | | | 0.99 | |
| Frt | | 0.944 | | | 0.995 | | | 0.956 | | | 0.967 | |
| Flt Protected | | 0.996 | | | 0.977 | | | 0.975 | | | 0.997 | |
| Satd. Flow (prot) | 0 | 1617 | 0 | 0 | 1580 | 0 | 0 | 1762 | 0 | 0 | 1935 | 0 |
| Flt Permitted | | 0.960 | | | 0.717 | | | 0.791 | | | 0.971 | |
| Satd. Flow (perm) | 0 | 1559 | 0 | 0 | 1160 | 0 | 0 | 1428 | 0 | 0 | 1884 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 69 | | | 4 | | | 49 | | | 34 | |
| Link Speed (k/h) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (m) | | 788.4 | | | 805.6 | | | 914.0 | | | 590.7 | |
| Travel Time (s) | | 71.0 | | | 72.5 | | | 82.3 | | | 53.2 | |
| Confl. Peds. (#/hr) | | | | | | | 1 | | 2 | 2 | | 1 |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Heavy Vehicles (%) | 20% | 18% | 35% | 53% | 14% | 10% | 9% | 2% | 25% | 8% | 9% | 0% |
| Adj. Flow (vph) | 24 | 155 | 127 | 148 | 151 | 11 | 88 | 27 | 55 | 12 | 143 | 51 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 306 | 0 | 0 | 310 | 0 | 0 | 170 | 0 | 0 | 206 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (m) | 6.1 | 30.5 | | 6.1 | 30.5 | | 6.1 | 30.5 | | 6.1 | 30.5 | |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Size(m) | 6.1 | 1.8 | | 6.1 | 1.8 | | 6.1 | 1.8 | | 6.1 | 1.8 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 28.7 | | | 28.7 | | | 28.7 | | | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |

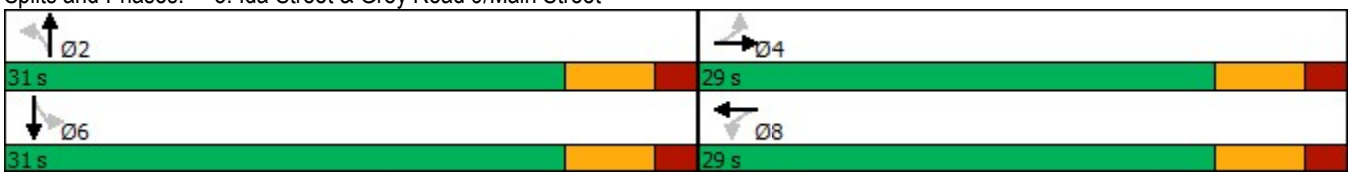


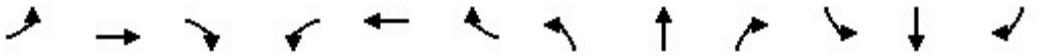
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Minimum Split (s) | 26.0 | 26.0 | | 26.0 | 26.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (s) | 29.0 | 29.0 | | 29.0 | 29.0 | | 31.0 | 31.0 | | 31.0 | 31.0 | |
| Total Split (%) | 48.3% | 48.3% | | 48.3% | 48.3% | | 51.7% | 51.7% | | 51.7% | 51.7% | |
| Maximum Green (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | Min | Min | | Min | Min | | None | None | | None | None | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 24.0 | | | 24.0 | | | 14.8 | | | 14.8 | |
| Actuated g/C Ratio | | 0.56 | | | 0.56 | | | 0.34 | | | 0.34 | |
| v/c Ratio | | 0.34 | | | 0.48 | | | 0.33 | | | 0.31 | |
| Control Delay | | 8.0 | | | 12.6 | | | 12.0 | | | 12.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 8.0 | | | 12.6 | | | 12.0 | | | 12.6 | |
| LOS | | A | | | B | | | B | | | B | |
| Approach Delay | | 8.0 | | | 12.6 | | | 12.0 | | | 12.6 | |
| Approach LOS | | A | | | B | | | B | | | B | |
| Queue Length 50th (m) | | 11.8 | | | 17.6 | | | 7.2 | | | 10.4 | |
| Queue Length 95th (m) | | 21.9 | | | 31.9 | | | 17.7 | | | 22.0 | |
| Internal Link Dist (m) | | 764.4 | | | 781.6 | | | 890.0 | | | 566.7 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 905 | | | 652 | | | 890 | | | 1162 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.34 | | | 0.48 | | | 0.19 | | | 0.18 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 60 | | | |
| Actuated Cycle Length: 43.1 | | | |
| Natural Cycle: 50 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.48 | | | |
| Intersection Signal Delay: 11.1 | | Intersection LOS: B | |

Intersection Capacity Utilization 77.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Ida Street & Grey Road 9/Main Street

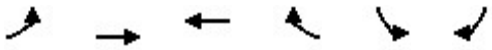




| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 20 | 127 | 104 | 121 | 124 | 9 | 72 | 22 | 45 | 10 | 117 | 42 |
| Future Volume (Veh/h) | 20 | 127 | 104 | 121 | 124 | 9 | 72 | 22 | 45 | 10 | 117 | 42 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 24 | 155 | 127 | 148 | 151 | 11 | 88 | 27 | 55 | 12 | 143 | 51 |
| Pedestrians | | 1 | | | 2 | | | | | | | |
| Lane Width (m) | | 4.8 | | | 4.8 | | | | | | | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | | | | | |
| Percent Blockage | | 0 | | | 0 | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 162 | | | 282 | | | 842 | 724 | 220 | 790 | 782 | 158 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 162 | | | 282 | | | 842 | 724 | 220 | 790 | 782 | 158 |
| tC, single (s) | 4.3 | | | 4.6 | | | 7.2 | 6.5 | 6.5 | 7.2 | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.4 | | | 2.7 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.1 | 3.3 |
| p0 queue free % | 98 | | | 86 | | | 34 | 91 | 93 | 95 | 47 | 94 |
| cM capacity (veh/h) | 1314 | | | 1037 | | | 134 | 296 | 763 | 228 | 267 | 892 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 306 | 310 | 170 | 206 |
| Volume Left | 24 | 148 | 88 | 12 |
| Volume Right | 127 | 11 | 55 | 51 |
| cSH | 1314 | 1037 | 207 | 320 |
| Volume to Capacity | 0.02 | 0.14 | 0.82 | 0.64 |
| Queue Length 95th (m) | 0.4 | 3.8 | 45.6 | 31.9 |
| Control Delay (s) | 0.8 | 5.1 | 71.9 | 34.6 |
| Lane LOS | A | A | F | D |
| Approach Delay (s) | 0.8 | 5.1 | 71.9 | 34.6 |
| Approach LOS | | | F | D |

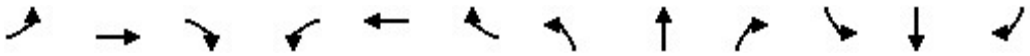
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 21.3 | | | |
| Intersection Capacity Utilization | 59.0% | ICU Level of Service | B | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 32 | 276 | 314 | 55 | 115 | 63 |
| Future Volume (Veh/h) | 32 | 276 | 314 | 55 | 115 | 63 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Hourly flow rate (vph) | 44 | 383 | 436 | 76 | 160 | 88 |
| Pedestrians | | 1 | 1 | | 10 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 522 | | | | 956 | 485 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 522 | | | | 956 | 485 |
| tC, single (s) | 4.2 | | | | 6.6 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.3 | | | | 3.7 | 3.3 |
| p0 queue free % | 96 | | | | 37 | 85 |
| cM capacity (veh/h) | 993 | | | | 253 | 572 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 427 | 512 | 248 |
| Volume Left | 44 | 0 | 160 |
| Volume Right | 0 | 76 | 88 |
| cSH | 993 | 1700 | 315 |
| Volume to Capacity | 0.04 | 0.30 | 0.79 |
| Queue Length 95th (m) | 1.1 | 0.0 | 48.0 |
| Control Delay (s) | 1.4 | 0.0 | 48.1 |
| Lane LOS | A | | E |
| Approach Delay (s) | 1.4 | 0.0 | 48.1 |
| Approach LOS | | | E |

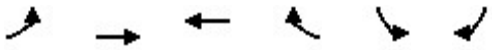
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 10.5 | | |
| Intersection Capacity Utilization | 56.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 13 | 346 | 25 | 9 | 332 | 3 | 43 | 2 | 13 | 80 | 5 | 13 |
| Future Volume (Veh/h) | 13 | 346 | 25 | 9 | 332 | 3 | 43 | 2 | 13 | 80 | 5 | 13 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Hourly flow rate (vph) | 17 | 449 | 32 | 12 | 431 | 4 | 56 | 3 | 17 | 104 | 6 | 17 |
| Pedestrians | | 3 | | | | | | 6 | | | 7 | |
| Lane Width (m) | | 3.8 | | | | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | | | | 1 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 442 | | | 487 | | | 985 | 971 | 471 | 982 | 985 | 443 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 442 | | | 487 | | | 985 | 971 | 471 | 982 | 985 | 443 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.2 | 6.5 | 6.4 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.6 | 4.0 | 3.5 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 72 | 99 | 97 | 50 | 98 | 97 |
| cM capacity (veh/h) | 1122 | | | 1081 | | | 204 | 245 | 558 | 207 | 241 | 613 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 498 | 447 | 76 | 127 |
| Volume Left | 17 | 12 | 56 | 104 |
| Volume Right | 32 | 4 | 17 | 17 |
| cSH | 1122 | 1081 | 239 | 228 |
| Volume to Capacity | 0.02 | 0.01 | 0.32 | 0.56 |
| Queue Length 95th (m) | 0.4 | 0.3 | 10.0 | 23.1 |
| Control Delay (s) | 0.5 | 0.3 | 26.9 | 38.9 |
| Lane LOS | A | A | D | E |
| Approach Delay (s) | 0.5 | 0.3 | 26.9 | 38.9 |
| Approach LOS | | | D | E |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 6.4 | | | |
| Intersection Capacity Utilization | 39.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



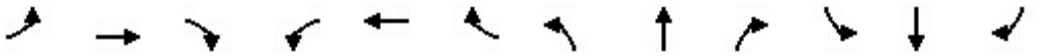
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 4 | 434 | 326 | 106 | 128 | 0 |
| Future Volume (Veh/h) | 4 | 434 | 326 | 106 | 128 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Hourly flow rate (vph) | 5 | 529 | 398 | 129 | 156 | 0 |
| Pedestrians | | | | | 4 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 531 | | | | 1006 | 466 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 531 | | | | 1006 | 466 |
| 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 | | | | 42 | 100 |
| cM capacity (veh/h) | 1042 | | | | 267 | 597 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 534 | 527 | 156 |
| Volume Left | 5 | 0 | 156 |
| Volume Right | 0 | 129 | 0 |
| cSH | 1042 | 1700 | 267 |
| Volume to Capacity | 0.00 | 0.31 | 0.58 |
| Queue Length 95th (m) | 0.1 | 0.0 | 25.7 |
| Control Delay (s) | 0.1 | 0.0 | 35.8 |
| Lane LOS | A | | E |
| Approach Delay (s) | 0.1 | 0.0 | 35.8 |
| Approach LOS | | | E |

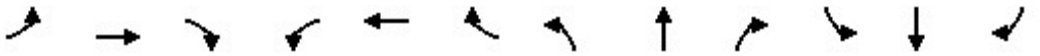
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.6 | | |
| Intersection Capacity Utilization | 39.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 37 | 41 | 113 | 52 | 58 | 34 |
| Future Volume (vph) | 37 | 41 | 113 | 52 | 58 | 34 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 4.8 | 3.5 | 3.3 | 3.5 | 3.5 | 3.3 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.929 | | 0.957 | | | |
| Flt Protected | 0.977 | | | | | 0.969 |
| Satd. Flow (prot) | 1954 | 0 | 1758 | 0 | 0 | 1741 |
| Flt Permitted | 0.977 | | | | | 0.969 |
| Satd. Flow (perm) | 1954 | 0 | 1758 | 0 | 0 | 1741 |
| Link Speed (k/h) | 40 | | 40 | | | 40 |
| Link Distance (m) | 359.8 | | 590.7 | | | 1083.8 |
| Travel Time (s) | 32.4 | | 53.2 | | | 97.5 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 6% |
| Adj. Flow (vph) | 46 | 51 | 141 | 65 | 73 | 43 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 97 | 0 | 206 | 0 | 0 | 116 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 4.8 | | 0.0 | | | 0.0 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.9 | | 4.9 | | | 4.9 |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 0.85 | 1.01 | 1.04 | 1.01 | 1.01 | 1.04 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Control Type: Unsignalized | | | |
| Intersection Capacity Utilization 28.7% | | ICU Level of Service A | |
| Analysis Period (min) 15 | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 52 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 35 |
| Future Volume (vph) | 52 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 35 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (m) | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 | 3.5 | 4.8 | 3.5 |
| Storage Length (m) | 0.0 | | 0.0 | 0.0 | | 0.0 | 15.0 | | 15.0 | 0.0 | | 0.0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.99 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.932 | | | 0.996 | | | 0.970 | | | 0.932 | |
| Flt Protected | | 0.994 | | | 0.987 | | | 0.974 | | | 0.995 | |
| Satd. Flow (prot) | 0 | 1686 | 0 | 0 | 1883 | 0 | 0 | 1857 | 0 | 0 | 1860 | 0 |
| Flt Permitted | | 0.931 | | | 0.820 | | | 0.793 | | | 0.949 | |
| Satd. Flow (perm) | 0 | 1578 | 0 | 0 | 1564 | 0 | 0 | 1512 | 0 | 0 | 1773 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 98 | | | 3 | | | 29 | | | 37 | |
| Link Speed (k/h) | | 40 | | | 40 | | | 40 | | | 40 | |
| Link Distance (m) | | 788.4 | | | 805.6 | | | 914.0 | | | 590.7 | |
| Travel Time (s) | | 71.0 | | | 72.5 | | | 82.3 | | | 53.2 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 1 | | | 3 | 3 | | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 100% | 4% | 7% | 34% | 5% | 0% | 5% | 14% | 13% | 0% | 2% | 13% |
| Adj. Flow (vph) | 55 | 173 | 229 | 62 | 171 | 7 | 246 | 113 | 101 | 7 | 29 | 37 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 457 | 0 | 0 | 240 | 0 | 0 | 460 | 0 | 0 | 73 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 | 1.01 | 0.85 | 1.01 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (m) | 6.1 | 30.5 | | 6.1 | 30.5 | | 6.1 | 30.5 | | 6.1 | 30.5 | |
| Trailing Detector (m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Position(m) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Size(m) | 6.1 | 1.8 | | 6.1 | 1.8 | | 6.1 | 1.8 | | 6.1 | 1.8 | |
| Detector 1 Type | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Delay (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | 28.7 | | | 28.7 | | | 28.7 | | | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 14.0 | 14.0 | | 14.0 | 14.0 | |
| Minimum Split (s) | 26.0 | 26.0 | | 26.0 | 26.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (s) | 29.0 | 29.0 | | 29.0 | 29.0 | | 31.0 | 31.0 | | 31.0 | 31.0 | |
| Total Split (%) | 48.3% | 48.3% | | 48.3% | 48.3% | | 51.7% | 51.7% | | 51.7% | 51.7% | |
| Maximum Green (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | | 6.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | Min | Min | | Min | Min | | None | None | | None | None | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | | 11.0 | 11.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Act Effct Green (s) | | 21.3 | | | 21.3 | | | 20.0 | | | 20.0 | |
| Actuated g/C Ratio | | 0.40 | | | 0.40 | | | 0.37 | | | 0.37 | |
| v/c Ratio | | 0.66 | | | 0.38 | | | 0.79 | | | 0.11 | |
| Control Delay | | 16.8 | | | 14.6 | | | 25.2 | | | 6.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 16.8 | | | 14.6 | | | 25.2 | | | 6.8 | |
| LOS | | B | | | B | | | C | | | A | |
| Approach Delay | | 16.8 | | | 14.6 | | | 25.2 | | | 6.8 | |
| Approach LOS | | B | | | B | | | C | | | A | |
| Queue Length 50th (m) | | 27.1 | | | 16.0 | | | 33.5 | | | 2.0 | |
| Queue Length 95th (m) | | 60.4 | | | 34.1 | | | #70.9 | | | 8.4 | |
| Internal Link Dist (m) | | 764.4 | | | 781.6 | | | 890.0 | | | 566.7 | |
| Turn Bay Length (m) | | | | | | | | | | | | |
| Base Capacity (vph) | | 742 | | | 682 | | | 730 | | | 858 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.62 | | | 0.35 | | | 0.63 | | | 0.09 | |

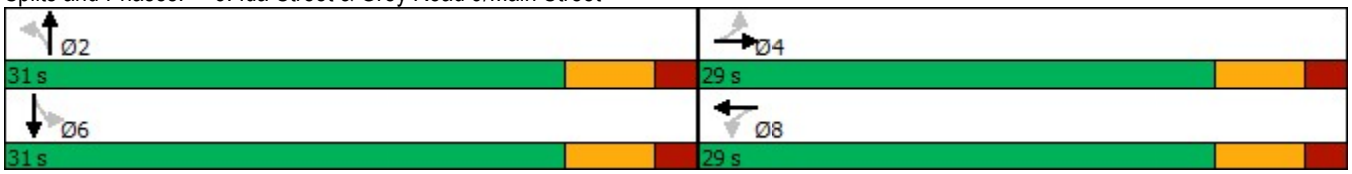
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 60 | | | |
| Actuated Cycle Length: 53.4 | | | |
| Natural Cycle: 55 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay: 18.9 | | Intersection LOS: B | |

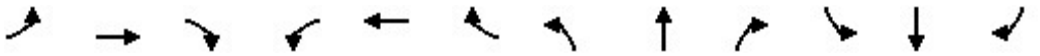
Intersection Capacity Utilization 69.1% ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 3: Ida Street & Grey Road 9/Main Street

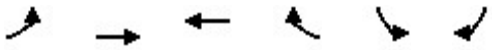




| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 52 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 35 |
| Future Volume (Veh/h) | 52 | 164 | 218 | 59 | 162 | 7 | 234 | 107 | 96 | 7 | 28 | 35 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 55 | 173 | 229 | 62 | 171 | 7 | 246 | 113 | 101 | 7 | 29 | 37 |
| Pedestrians | | | | | 3 | | | 1 | | | 3 | |
| Lane Width (m) | | | | | 4.8 | | | 4.8 | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | | | | 0 | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 181 | | | 403 | | | 748 | 704 | 292 | 860 | 814 | 178 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 181 | | | 403 | | | 748 | 704 | 292 | 860 | 814 | 178 |
| tC, single (s) | 5.1 | | | 4.4 | | | 7.1 | 6.6 | 6.3 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.1 | | | 2.5 | | | 3.5 | 4.1 | 3.4 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 94 | | | 94 | | | 5 | 63 | 86 | 95 | 89 | 96 |
| cM capacity (veh/h) | 967 | | | 1001 | | | 259 | 306 | 719 | 155 | 275 | 835 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 457 | 240 | 460 | 73 |
| Volume Left | 55 | 62 | 246 | 7 |
| Volume Right | 229 | 7 | 101 | 37 |
| cSH | 967 | 1001 | 315 | 374 |
| Volume to Capacity | 0.06 | 0.06 | 1.46 | 0.20 |
| Queue Length 95th (m) | 1.4 | 1.5 | 190.0 | 5.4 |
| Control Delay (s) | 1.7 | 2.7 | 254.7 | 16.9 |
| Lane LOS | A | A | F | C |
| Approach Delay (s) | 1.7 | 2.7 | 254.7 | 16.9 |
| Approach LOS | | | F | C |

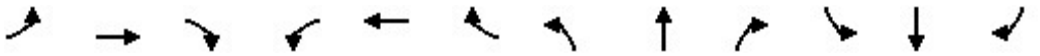
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 97.4 | | | |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service | C | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 40 | 314 | 251 | 121 | 84 | 46 |
| Future Volume (Veh/h) | 40 | 314 | 251 | 121 | 84 | 46 |
| 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) | 42 | 331 | 264 | 127 | 88 | 48 |
| Pedestrians | | 2 | 2 | | 6 | |
| Lane Width (m) | | 3.5 | 3.5 | | 4.8 | |
| Walking Speed (m/s) | | 1.1 | 1.1 | | 1.1 | |
| Percent Blockage | | 0 | 0 | | 1 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 397 | | | | 750 | 336 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 397 | | | | 750 | 336 |
| tC, single (s) | 4.1 | | | | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.6 | 3.3 |
| p0 queue free % | 96 | | | | 75 | 93 |
| cM capacity (veh/h) | 1164 | | | | 356 | 705 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 373 | 391 | 136 |
| Volume Left | 42 | 0 | 88 |
| Volume Right | 0 | 127 | 48 |
| cSH | 1164 | 1700 | 432 |
| Volume to Capacity | 0.04 | 0.23 | 0.32 |
| Queue Length 95th (m) | 0.9 | 0.0 | 10.1 |
| Control Delay (s) | 1.3 | 0.0 | 17.1 |
| Lane LOS | A | | C |
| Approach Delay (s) | 1.3 | 0.0 | 17.1 |
| Approach LOS | | | C |

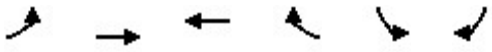
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.1 | | |
| Intersection Capacity Utilization | 57.4% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 18 | 365 | 43 | 10 | 342 | 4 | 23 | 7 | 18 | 57 | 3 | 11 |
| Future Volume (Veh/h) | 18 | 365 | 43 | 10 | 342 | 4 | 23 | 7 | 18 | 57 | 3 | 11 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| 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) | 20 | 406 | 48 | 11 | 380 | 4 | 26 | 8 | 20 | 63 | 3 | 12 |
| Pedestrians | | 4 | | | 7 | | | 17 | | | 18 | |
| Lane Width (m) | | 3.8 | | | 3.8 | | | 3.5 | | | 3.5 | |
| Walking Speed (m/s) | | 1.1 | | | 1.1 | | | 1.1 | | | 1.1 | |
| Percent Blockage | | 0 | | | 1 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 402 | | | 471 | | | 908 | 911 | 454 | 923 | 933 | 404 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 402 | | | 471 | | | 908 | 911 | 454 | 923 | 933 | 404 |
| tC, single (s) | 4.2 | | | 4.2 | | | 7.6 | 6.5 | 6.3 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.3 | | | 2.3 | | | 4.0 | 4.0 | 3.4 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 87 | 97 | 97 | 72 | 99 | 98 |
| cM capacity (veh/h) | 1112 | | | 1020 | | | 193 | 260 | 583 | 222 | 253 | 638 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 474 | 395 | 54 | 78 |
| Volume Left | 20 | 11 | 26 | 63 |
| Volume Right | 48 | 4 | 20 | 12 |
| cSH | 1112 | 1020 | 270 | 248 |
| Volume to Capacity | 0.02 | 0.01 | 0.20 | 0.31 |
| Queue Length 95th (m) | 0.4 | 0.2 | 5.5 | 9.8 |
| Control Delay (s) | 0.5 | 0.4 | 21.6 | 26.0 |
| Lane LOS | A | A | C | D |
| Approach Delay (s) | 0.5 | 0.4 | 21.6 | 26.0 |
| Approach LOS | | | C | D |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 3.6 | | | |
| Intersection Capacity Utilization | 44.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 6 | 434 | 347 | 259 | 105 | 5 |
| Future Volume (Veh/h) | 6 | 434 | 347 | 259 | 105 | 5 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 7 | 493 | 394 | 294 | 119 | 6 |
| Pedestrians | | | | | 22 | |
| Lane Width (m) | | | | | 4.8 | |
| Walking Speed (m/s) | | | | | 1.1 | |
| Percent Blockage | | | | | 3 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 710 | | | | 1070 | 563 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 710 | | | | 1070 | 563 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 50 | 99 |
| cM capacity (veh/h) | 875 | | | | 238 | 515 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 500 | 688 | 125 |
| Volume Left | 7 | 0 | 119 |
| Volume Right | 0 | 294 | 6 |
| cSH | 875 | 1700 | 245 |
| Volume to Capacity | 0.01 | 0.40 | 0.51 |
| Queue Length 95th (m) | 0.2 | 0.0 | 20.2 |
| Control Delay (s) | 0.2 | 0.0 | 34.1 |
| Lane LOS | A | | D |
| Approach Delay (s) | 0.2 | 0.0 | 34.1 |
| Approach LOS | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.3 | | |
| Intersection Capacity Utilization | 46.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]


For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk



**Filename:** Future Total 2032 Eco-Park Traffic Volumes.arc8
**Path:** J:\1000\1060-Flato Dev\6220- Glenelg Expansion Lands\Design\Traffic\Working\Roundabout\Eco-Park FT 2023
**Report generation date:** 2022-08-25 9:34:23 PM

## Summary of intersection performance

| | PM | | | | | | |
|---|---|---|---|---|---|---|---|
| | Queue (Veh) | 95% Queue (Veh) | Delay (s) | V/C Ratio | LOS | Intersection Delay (s) | Intersection LOS |
| | Future Total 2032 [Entry Lane Simulation] - 2022 | | | | | | |
| **Leg 1** | 0.22 | 1.33 | 2.56 | N/A | A | 3.02 | A |
| **Leg 2** | 0.04 | ~1 | 1.35 | N/A | A | | |
| **Leg 3** | 0.43 | 2.36 | 2.80 | N/A | A | | |
| **Leg 4** | 0.60 | 2.89 | 3.75 | N/A | A | | |

*Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Intersection LOS and Intersection Delay are demand-weighted averages.*

*"D1 - 2022, AM" model duration: 8:00 AM - 9:30 AM*
*"D2 - 2022, PM " model duration: 5:00 PM - 6:30 PM*

*Run using Junctions 8.0.6.541 at 2022-08-25 9:34:23 PM*

## File summary

| | |
|---|---|
| **Title** | (untitled) |
| **Location** | |
| **Site Number** | |
| **Date** | 2022-08-12 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Analyst** | khagan |
| **Description** | |

## Analysis Options

| Vehicle Length (m) | Do Queue Variations | Calculate Residual Capacity | Residual Capacity Criteria Type | V/C Ratio Threshold | Average Delay Threshold (s) | Queue Threshold (PCE) |
|---|---|---|---|---|---|---|
| 5.75 | ✓ | | N/A | 0.85 | 36.00 | 20.00 |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|---|---|---|---|---|---|---|---|
| m | kph | Veh | Veh | perHour | s | -Min | perMin |

## Entry Lane Analysis Options

| Stop Criteria (%) | Random Seed | Results Refresh Speed (s) | Individual Vehicle Animation Number Of Trials | Time Step Size (s) | Last Run Random Seed | Last Run Number Of Trials |
|---|---|---|---|---|---|---|
| 1.00 | -1 | 3 | 1 | 10 | 142901952 | 1583 |

# Future Total 2032 - 2022, PM

## Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Entry Lane Analysis | A1 - Future Total 2032 [Entry Lane Simulation] | This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Include In Report | Use Specific Demand Set(s) | Specific Demand Set(s) | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|---|
| Future Total 2032 | Entry Lane Simulation | | ✓ | | | | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022, PM | 2022 | PM | | ONE HOUR | 17:00 | 18:30 | 90 | 15 | | | | ✓ | | |

# Intersection Network

## Intersections

| Intersection | Name | Intersection Type | Leg Order | Grade Separated | Large Roundabout | Intersection Delay (s) | Intersection LOS |
|---|---|---|---|---|---|---|---|
| 1 | untitled | Roundabout | 1,2,3,4 | | | 3.02 | A |

## Intersection Network Options

| Driving Side | Lighting |
|---|---|
| Right | Normal/unknown |

# Legs

## Legs

| Leg | Leg | Name | Description |
|---|---|---|---|
| 1 | 1 | Main Street W | |
| 2 | 2 | Ida Street | |
| 3 | 3 | Grey Road 9 | |
| 4 | 4 | Ida Street | |

## Capacity Options

| Leg | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|
| 1 | 0.00 | 99999.00 |
| 2 | 0.00 | 99999.00 |
| 3 | 0.00 | 99999.00 |
| 4 | 0.00 | 99999.00 |

## Roundabout Geometry

| Leg | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| 1 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| 2 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| 3 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Leg | Enter slope and intercept directly | Entered slope | Entered intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|---|
| 1 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | | (calculated) | (calculated) | 0.557 | 1246.355 |

*The slope and intercept shown above include any corrections and adjustments.*

## Entry Lane Analysis: Leg options

| Leg | Lane Capacity Source | Traffic Considering Secondary Lanes (%) |
|---|---|---|
| 1 | Evenly split | 10.00 |
| 2 | Evenly split | 10.00 |
| 3 | Evenly split | 10.00 |
| 4 | Evenly split | 10.00 |

## Lanes

| Leg | Lane Level | Lane | Has Limited Storage | Storage (PCE) | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 2 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 3 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 4 | 1 | 1 | | Infinity | 0.00 | 99999.00 |

## Entry Lane slope and intercept

| Leg | Slope | Intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|
| 1 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | (calculated) | (calculated) | 0.557 | 1246.355 |

### Lane Movements

| Intersection | Leg | Lane Level | Lane | Leg | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 |
| 1 | 1 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 2 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 3 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 4 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCE Factor for a Truck (PCE) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | Truck Percentages | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Leg | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | ONE HOUR | ✓ | 228.00 | 100.000 |
| 2 | ONE HOUR | ✓ | 70.00 | 100.000 |
| 3 | ONE HOUR | ✓ | 434.00 | 100.000 |
| 4 | ONE HOUR | ✓ | 437.00 | 100.000 |

# Turning Proportions

### Turning Counts / Proportions (Veh/hr) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.000 | 7.000 | 162.000 | 59.000 |
| | 2 | 7.000 | 0.000 | 35.000 | 28.000 |
| | 3 | 164.000 | 52.000 | 0.000 | 218.000 |
| | 4 | 96.000 | 107.000 | 234.000 | 0.000 |

### Turning Proportions (Veh) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.00 | 0.03 | 0.71 | 0.26 |
| | 2 | 0.10 | 0.00 | 0.50 | 0.40 |
| | 3 | 0.38 | 0.12 | 0.00 | 0.50 |
| | 4 | 0.22 | 0.24 | 0.54 | 0.00 |

# Vehicle Mix

### Average PCE Per Vehicle - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 1.000 | 1.000 | 1.053 | 1.344 |
| | 2 | 1.000 | 1.000 | 1.125 | 1.000 |
| | 3 | 1.039 | 1.143 | 1.000 | 1.071 |
| | 4 | 1.132 | 1.143 | 1.045 | 1.000 |

### Truck Percentages - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.0 | 0.0 | 5.3 | 34.4 |
| | 2 | 0.0 | 0.0 | 12.5 | 0.0 |
| | 3 | 3.9 | 14.3 | 0.0 | 7.1 |
| | 4 | 13.2 | 14.3 | 4.5 | 0.0 |

# Results

### Results Summary for whole modelled period

| Leg | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Intersection Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.56 | 0.22 | 1.33 | A | 231.27 | 346.90 | 13.41 | 2.32 | 0.15 |
| 2 | 1.35 | 0.04 | ~1 | A | 69.33 | 104.00 | 2.16 | 1.24 | 0.02 |
| 3 | 2.80 | 0.43 | 2.36 | A | 424.35 | 636.52 | 24.73 | 2.33 | 0.27 |
| 4 | 3.75 | 0.60 | 2.89 | A | 435.77 | 653.65 | 32.90 | 3.02 | 0.37 |

# Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]


For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk



**Filename:** Future Total 2032 Eco-Park Traffic Volumes.arc8
**Path:** J:\1000\1060-Flato Dev\6220- Glenelg Expansion Lands\Design\Traffic\Working\Roundabout\Eco-Park FT 2023
**Report generation date:** 2022-08-25 9:28:00 PM

## Summary of intersection performance

| | AM | | | | | | |
|---|---|---|---|---|---|---|---|
| | Queue (Veh) | 95% Queue (Veh) | Delay (s) | V/C Ratio | LOS | Intersection Delay (s) | Intersection LOS |
| | Future Total 2032 [Entry Lane Simulation] - 2022 | | | | | | |
| **Leg 1** | 0.31 | 1.85 | 2.53 | N/A | A | 2.36 | A |
| **Leg 2** | 0.12 | 0.62 | 1.75 | N/A | A | | |
| **Leg 3** | 0.33 | 1.83 | 3.09 | N/A | A | | |
| **Leg 4** | 0.07 | ~1 | 1.22 | N/A | A | | |

*Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Intersection LOS and Intersection Delay are demand-weighted averages.*

*"D1 - 2022, AM " model duration: 8:00 AM - 9:30 AM*
*"D2 - 2022, PM" model duration: 5:00 PM - 6:30 PM*

*Run using Junctions 8.0.6.541 at 2022-08-25 9:28:00 PM*

## File summary

| | |
|---|---|
| **Title** | (untitled) |
| **Location** | |
| **Site Number** | |
| **Date** | 2022-08-12 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Analyst** | khagan |
| **Description** | |

## Analysis Options

| Vehicle Length (m) | Do Queue Variations | Calculate Residual Capacity | Residual Capacity Criteria Type | V/C Ratio Threshold | Average Delay Threshold (s) | Queue Threshold (PCE) |
|---|---|---|---|---|---|---|
| 5.75 | ✓ | | N/A | 0.85 | 36.00 | 20.00 |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|---|---|---|---|---|---|---|---|
| m | kph | Veh | Veh | perHour | s | -Min | perMin |

## Entry Lane Analysis Options

| Stop Criteria (%) | Random Seed | Results Refresh Speed (s) | Individual Vehicle Animation Number Of Trials | Time Step Size (s) | Last Run Random Seed | Last Run Number Of Trials |
|---|---|---|---|---|---|---|
| 1.00 | -1 | 3 | 1 | 10 | 97924373 | 2865 |

# Future Total 2032 - 2022, AM

## Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Entry Lane Analysis | A1 - Future Total 2032 [Entry Lane Simulation] | This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Include In Report | Use Specific Demand Set(s) | Specific Demand Set(s) | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|---|
| Future Total 2032 | Entry Lane Simulation | | ✓ | | | | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022, AM | 2022 | AM | | ONE HOUR | 08:00 | 09:30 | 90 | 15 | | | | ✓ | | |

# Intersection Network

## Intersections

| Intersection | Name | Intersection Type | Leg Order | Grade Separated | Large Roundabout | Intersection Delay (s) | Intersection LOS |
|---|---|---|---|---|---|---|---|
| 1 | untitled | Roundabout | 1,2,3,4 | | | 2.36 | A |

## Intersection Network Options

| Driving Side | Lighting |
|---|---|
| Right | Normal/unknown |

# Legs

## Legs

| Leg | Leg | Name | Description |
|---|---|---|---|
| **1** | 1 | Main Street W | |
| **2** | 2 | Ida Street | |
| **3** | 3 | Grey Road 9 | |
| **4** | 4 | Ida Street | |

## Capacity Options

| Leg | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|
| **1** | 0.00 | 99999.00 |
| **2** | 0.00 | 99999.00 |
| **3** | 0.00 | 99999.00 |
| **4** | 0.00 | 99999.00 |

## Roundabout Geometry

| Leg | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **1** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| **2** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| **3** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Leg | Enter slope and intercept directly | Entered slope | Entered intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|---|
| 1 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | | (calculated) | (calculated) | 0.557 | 1246.355 |

*The slope and intercept shown above include any corrections and adjustments.*

## Entry Lane Analysis: Leg options

| Leg | Lane Capacity Source | Traffic Considering Secondary Lanes (%) |
|---|---|---|
| 1 | Evenly split | 10.00 |
| 2 | Evenly split | 10.00 |
| 3 | Evenly split | 10.00 |
| 4 | Evenly split | 10.00 |

## Lanes

| Leg | Lane Level | Lane | Has Limited Storage | Storage (PCE) | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 2 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 3 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 4 | 1 | 1 | | Infinity | 0.00 | 99999.00 |

## Entry Lane slope and intercept

| Leg | Slope | Intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|
| 1 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | (calculated) | (calculated) | 0.557 | 1246.355 |

### Lane Movements

| Intersection | Leg | Lane Level | Lane | Leg | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 |
| 1 | 1 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 2 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 3 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 4 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCE Factor for a Truck (PCE) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | Truck Percentages | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Leg | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | ONE HOUR | ✓ | 254.00 | 100.000 |
| 2 | ONE HOUR | ✓ | 169.00 | 100.000 |
| 3 | ONE HOUR | ✓ | 251.00 | 100.000 |
| 4 | ONE HOUR | ✓ | 139.00 | 100.000 |

# Turning Proportions

### Turning Counts / Proportions (Veh/hr) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.000 | 9.000 | 124.000 | 121.000 |
| | 2 | 10.000 | 0.000 | 42.000 | 117.000 |
| | 3 | 127.000 | 20.000 | 0.000 | 104.000 |
| | 4 | 45.000 | 22.000 | 72.000 | 0.000 |

### Turning Proportions (Veh) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.00 | 0.04 | 0.49 | 0.48 |
| | 2 | 0.06 | 0.00 | 0.25 | 0.69 |
| | 3 | 0.51 | 0.08 | 0.00 | 0.41 |
| | 4 | 0.32 | 0.16 | 0.52 | 0.00 |

# Vehicle Mix

### Average PCE Per Vehicle - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 1.000 | 1.100 | 1.141 | 1.528 |
| | 2 | 1.083 | 1.000 | 1.000 | 1.091 |
| | 3 | 1.175 | 1.200 | 1.000 | 1.353 |
| | 4 | 1.250 | 1.000 | 1.091 | 1.000 |

### Truck Percentages - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.0 | 10.0 | 14.1 | 52.8 |
| | 2 | 8.3 | 0.0 | 0.0 | 9.1 |
| | 3 | 17.5 | 20.0 | 0.0 | 35.3 |
| | 4 | 25.0 | 0.0 | 9.1 | 0.0 |

# Results

### Results Summary for whole modelled period

| Leg | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Intersection Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.53 | 0.31 | 1.85 | A | 310.26 | 465.39 | 18.87 | 2.43 | 0.21 |
| 2 | 1.75 | 0.12 | 0.62 | A | 167.47 | 251.20 | 6.50 | 1.55 | 0.07 |
| 3 | 3.09 | 0.33 | 1.83 | A | 288.72 | 433.08 | 20.39 | 2.83 | 0.23 |
| 4 | 1.22 | 0.07 | ~1 | A | 142.55 | 213.83 | 4.45 | 1.25 | 0.05 |

# Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]


**Filename:** Future Total 2032 Traffic Volumes.arc8
**Path:** J:\1000\1060-Flato Dev\6220- Glenelg Expansion Lands\Design\Traffic\Working\Roundabout
**Report generation date:** 2022-08-12 10:15:07 AM

## Summary of intersection performance

| | PM | | | | | | |
|---|---|---|---|---|---|---|---|
| | Queue (Veh) | 95% Queue (Veh) | Delay (s) | V/C Ratio | LOS | Intersection Delay (s) | Intersection LOS |
| | Future Total 2032 [Entry Lane Simulation] - 2022 | | | | | | |
| **Leg 1** | 0.15 | 0.81 | 1.57 | N/A | A | 1.40 | A |
| **Leg 2** | 0.02 | ~1 | 0.91 | N/A | A | | |
| **Leg 3** | 0.14 | 0.77 | 1.44 | N/A | A | | |
| **Leg 4** | 0.04 | ~1 | 1.12 | N/A | A | | |

*Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Intersection LOS and Intersection Delay are demand-weighted averages.*

*"D1 - 2022, AM" model duration: 8:00 AM - 9:30 AM*
*"D2 - 2022, PM " model duration: 5:00 PM - 6:30 PM*

*Run using Junctions 8.0.6.541 at 2022-08-12 10:15:07 AM*

## File summary

| | |
|---|---|
| **Title** | (untitled) |
| **Location** | |
| **Site Number** | |
| **Date** | 2022-08-12 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Analyst** | khagan |
| **Description** | |

## Analysis Options

| Vehicle Length (m) | Do Queue Variations | Calculate Residual Capacity | Residual Capacity Criteria Type | V/C Ratio Threshold | Average Delay Threshold (s) | Queue Threshold (PCE) |
|---|---|---|---|---|---|---|
| 5.75 | ✓ | | N/A | 0.85 | 36.00 | 20.00 |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|---|---|---|---|---|---|---|---|
| m | kph | Veh | Veh | perHour | s | -Min | perMin |

## Entry Lane Analysis Options

| Stop Criteria (%) | Random Seed | Results Refresh Speed (s) | Individual Vehicle Animation Number Of Trials | Time Step Size (s) | Last Run Random Seed | Last Run Number Of Trials |
|---|---|---|---|---|---|---|
| 1.00 | -1 | 3 | 1 | 10 | 123421417 | 6619 |

# Future Total 2032 - 2022, PM

## Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Entry Lane Analysis | A1 - Future Total 2032 [Entry Lane Simulation] | This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Include In Report | Use Specific Demand Set(s) | Specific Demand Set(s) | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|---|
| Future Total 2032 | Entry Lane Simulation | | ✓ | | | | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022, PM | 2022 | PM | | ONE HOUR | 17:00 | 18:30 | 90 | 15 | | | | ✓ | | |

# Intersection Network

## Intersections

| Intersection | Name | Intersection Type | Leg Order | Grade Separated | Large Roundabout | Intersection Delay (s) | Intersection LOS |
|---|---|---|---|---|---|---|---|
| 1 | untitled | Roundabout | 1,2,3,4 | | | 1.40 | A |

## Intersection Network Options

| Driving Side | Lighting |
|---|---|
| Right | Normal/unknown |

# Legs

## Legs

| Leg | Leg | Name | Description |
|---|---|---|---|
| **1** | 1 | Main Street W | |
| **2** | 2 | Ida Street | |
| **3** | 3 | Grey Road 9 | |
| **4** | 4 | Ida Street | |

## Capacity Options

| Leg | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|
| **1** | 0.00 | 99999.00 |
| **2** | 0.00 | 99999.00 |
| **3** | 0.00 | 99999.00 |
| **4** | 0.00 | 99999.00 |

## Roundabout Geometry

| Leg | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **1** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| **2** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| **3** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Leg | Enter slope and intercept directly | Entered slope | Entered intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|---|
| 1 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | | (calculated) | (calculated) | 0.557 | 1246.355 |

*The slope and intercept shown above include any corrections and adjustments.*

## Entry Lane Analysis: Leg options

| Leg | Lane Capacity Source | Traffic Considering Secondary Lanes (%) |
|---|---|---|
| 1 | Evenly split | 10.00 |
| 2 | Evenly split | 10.00 |
| 3 | Evenly split | 10.00 |
| 4 | Evenly split | 10.00 |

## Lanes

| Leg | Lane Level | Lane | Has Limited Storage | Storage (PCE) | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 2 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 3 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 4 | 1 | 1 | | Infinity | 0.00 | 99999.00 |

## Entry Lane slope and intercept

| Leg | Slope | Intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|
| 1 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | (calculated) | (calculated) | 0.557 | 1246.355 |

### Lane Movements

| Intersection | Leg | Lane Level | Lane | Leg | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 |
| 1 | 1 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 2 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 3 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 4 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCE Factor for a Truck (PCE) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | Truck Percentages | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Leg | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | ONE HOUR | ✓ | 258.00 | 100.000 |
| 2 | ONE HOUR | ✓ | 56.00 | 100.000 |
| 3 | ONE HOUR | ✓ | 269.00 | 100.000 |
| 4 | ONE HOUR | ✓ | 88.00 | 100.000 |

# Turning Proportions

### Turning Counts / Proportions (Veh/hr) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.000 | 11.000 | 209.000 | 38.000 |
| | 2 | 11.000 | 0.000 | 35.000 | 10.000 |
| | 3 | 200.000 | 52.000 | 0.000 | 17.000 |
| | 4 | 45.000 | 17.000 | 26.000 | 0.000 |

### Turning Proportions (Veh) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.00 | 0.04 | 0.81 | 0.15 |
| | 2 | 0.20 | 0.00 | 0.63 | 0.18 |
| | 3 | 0.74 | 0.19 | 0.00 | 0.06 |
| | 4 | 0.51 | 0.19 | 0.30 | 0.00 |

# Vehicle Mix

### Average PCE Per Vehicle - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 1.000 | 1.000 | 1.053 | 1.344 |
| | 2 | 1.000 | 1.000 | 1.125 | 1.000 |
| | 3 | 1.039 | 1.143 | 1.000 | 1.071 |
| | 4 | 1.132 | 1.143 | 1.045 | 1.000 |

### Truck Percentages - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.0 | 0.0 | 5.3 | 34.4 |
| | 2 | 0.0 | 0.0 | 12.5 | 0.0 |
| | 3 | 3.9 | 14.3 | 0.0 | 7.1 |
| | 4 | 13.2 | 14.3 | 4.5 | 0.0 |

# Results

### Results Summary for whole modelled period

| Leg | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Intersection Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.57 | 0.15 | 0.81 | A | 259.29 | 388.93 | 9.57 | 1.48 | 0.11 |
| 2 | 0.91 | 0.02 | ~1 | A | 55.64 | 83.46 | 1.29 | 0.92 | 0.01 |
| 3 | 1.44 | 0.14 | 0.77 | A | 263.93 | 395.89 | 8.62 | 1.31 | 0.10 |
| 4 | 1.12 | 0.04 | ~1 | A | 89.61 | 134.41 | 2.53 | 1.13 | 0.03 |

# Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]


**Filename:** Future Total 2032 Traffic Volumes.arc8
**Path:** J:\1000\1060-Flato Dev\6220- Glenelg Expansion Lands\Design\Traffic\Working\Roundabout
**Report generation date:** 2022-08-12 10:05:43 AM

## Summary of intersection performance

| | AM | | | | | | |
|---|---|---|---|---|---|---|---|
| | Queue (Veh) | 95% Queue (Veh) | Delay (s) | V/C Ratio | LOS | Intersection Delay (s) | Intersection LOS |
| | Future Total 2032 [Entry Lane Simulation] - 2022 | | | | | | |
| Leg 1 | 0.14 | 0.84 | 1.51 | N/A | A | 1.42 | A |
| Leg 2 | 0.02 | ~1 | 0.79 | N/A | A | | |
| Leg 3 | 0.14 | 0.79 | 1.59 | N/A | A | | |
| Leg 4 | 0.02 | ~1 | 0.99 | N/A | A | | |

*Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Intersection LOS and Intersection Delay are demand-weighted averages.*

*"D1 - 2022, AM " model duration: 8:00 AM - 9:30 AM*
*"D2 - 2022, PM" model duration: 5:00 PM - 6:30 PM*

*Run using Junctions 8.0.6.541 at 2022-08-12 10:05:43 AM*

## File summary

| | |
|---|---|
| **Title** | (untitled) |
| **Location** | |
| **Site Number** | |
| **Date** | 2022-08-12 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Analyst** | khagan |
| **Description** | |

## Analysis Options

| Vehicle Length (m) | Do Queue Variations | Calculate Residual Capacity | Residual Capacity Criteria Type | V/C Ratio Threshold | Average Delay Threshold (s) | Queue Threshold (PCE) |
|---|---|---|---|---|---|---|
| 5.75 | ✓ | | N/A | 0.85 | 36.00 | 20.00 |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|---|---|---|---|---|---|---|---|
| m | kph | Veh | Veh | perHour | s | -Min | perMin |

## Entry Lane Analysis Options

| Stop Criteria (%) | Random Seed | Results Refresh Speed (s) | Individual Vehicle Animation Number Of Trials | Time Step Size (s) | Last Run Random Seed | Last Run Number Of Trials |
|---|---|---|---|---|---|---|
| 1.00 | -1 | 3 | 1 | 10 | 166832361 | 7187 |

# Future Total 2032 - 2022, AM

## Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Entry Lane Analysis | A1 - Future Total 2032 [Entry Lane Simulation] | This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Include In Report | Use Specific Demand Set(s) | Specific Demand Set(s) | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|---|
| Future Total 2032 | Entry Lane Simulation | | ✓ | | | | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Results For Central Hour Only | Single Time Segment Only | Locked | Run Automatically | Use Relationship | Relationship |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022, AM | 2022 | AM | | ONE HOUR | 08:00 | 09:30 | 90 | 15 | | | | ✓ | | |

# Intersection Network

## Intersections

| Intersection | Name | Intersection Type | Leg Order | Grade Separated | Large Roundabout | Intersection Delay (s) | Intersection LOS |
|---|---|---|---|---|---|---|---|
| 1 | untitled | Roundabout | 1,2,3,4 | | | 1.42 | A |

## Intersection Network Options

| Driving Side | Lighting |
|---|---|
| Right | Normal/unknown |

# Legs

## Legs

| Leg | Leg | Name | Description |
|---|---|---|---|
| **1** | 1 | Main Street W | |
| **2** | 2 | Ida Street | |
| **3** | 3 | Grey Road 9 | |
| **4** | 4 | Ida Street | |

## Capacity Options

| Leg | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|
| **1** | 0.00 | 99999.00 |
| **2** | 0.00 | 99999.00 |
| **3** | 0.00 | 99999.00 |
| **4** | 0.00 | 99999.00 |

## Roundabout Geometry

| Leg | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **1** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| **2** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |
| **3** | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 3.80 | 4.25 | 5.00 | 20.00 | 35.00 | 32.50 | |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Leg | Enter slope and intercept directly | Entered slope | Entered intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|---|
| 1 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | | (calculated) | (calculated) | 0.557 | 1246.355 |

*The slope and intercept shown above include any corrections and adjustments.*

## Entry Lane Analysis: Leg options

| Leg | Lane Capacity Source | Traffic Considering Secondary Lanes (%) |
|---|---|---|
| 1 | Evenly split | 10.00 |
| 2 | Evenly split | 10.00 |
| 3 | Evenly split | 10.00 |
| 4 | Evenly split | 10.00 |

## Lanes

| Leg | Lane Level | Lane | Has Limited Storage | Storage (PCE) | Minimum Capacity (PCE/hr) | Maximum Capacity (PCE/hr) |
|---|---|---|---|---|---|---|
| 1 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 2 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 3 | 1 | 1 | | Infinity | 0.00 | 99999.00 |
| 4 | 1 | 1 | | Infinity | 0.00 | 99999.00 |

## Entry Lane slope and intercept

| Leg | Slope | Intercept (PCE/hr) | Final Slope | Final Intercept (PCE/hr) |
|---|---|---|---|---|
| 1 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 2 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 3 | (calculated) | (calculated) | 0.557 | 1246.355 |
| 4 | (calculated) | (calculated) | 0.557 | 1246.355 |

### Lane Movements

| Intersection | Leg | Lane Level | Lane | Leg | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 |
| 1 | 1 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 2 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 3 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |
| 1 | 4 | 1 | 1 | ✓ | ✓ | ✓ | ✓ |

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCE Factor for a Truck (PCE) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | Truck Percentages | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Leg | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 1 | ONE HOUR | ✓ | 200.00 | 100.000 |
| 2 | ONE HOUR | ✓ | 69.00 | 100.000 |
| 3 | ONE HOUR | ✓ | 207.00 | 100.000 |
| 4 | ONE HOUR | ✓ | 44.00 | 100.000 |

# Turning Proportions

### Turning Counts / Proportions (Veh/hr) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.000 | 12.000 | 146.000 | 42.000 |
| | 2 | 14.000 | 0.000 | 42.000 | 13.000 |
| | 3 | 167.000 | 20.000 | 0.000 | 20.000 |
| | 4 | 28.000 | 3.000 | 13.000 | 0.000 |

### Turning Proportions (Veh) - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.00 | 0.06 | 0.73 | 0.21 |
| | 2 | 0.20 | 0.00 | 0.61 | 0.19 |
| | 3 | 0.81 | 0.10 | 0.00 | 0.10 |
| | 4 | 0.64 | 0.07 | 0.30 | 0.00 |

# Vehicle Mix

### Average PCE Per Vehicle - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 1.000 | 1.100 | 1.141 | 1.528 |
| | 2 | 1.083 | 1.000 | 1.000 | 1.091 |
| | 3 | 1.175 | 1.200 | 1.000 | 1.353 |
| | 4 | 1.250 | 1.000 | 1.091 | 1.000 |

### Truck Percentages - Intersection 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| From | 1 | 0.0 | 10.0 | 14.1 | 52.8 |
| | 2 | 8.3 | 0.0 | 0.0 | 9.1 |
| | 3 | 17.5 | 20.0 | 0.0 | 35.3 |
| | 4 | 25.0 | 0.0 | 9.1 | 0.0 |

# Results

### Results Summary for whole modelled period

| Leg | Max Delay (s) | Max Queue (Veh) | Max 95th percentile Queue (Veh) | Max LOS | Average Demand (Veh/hr) | Total Intersection Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (s) | Rate Of Queueing Delay (Veh-min/min) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.51 | 0.14 | 0.84 | A | 223.79 | 335.69 | 8.74 | 1.56 | 0.10 |
| 2 | 0.79 | 0.02 | ~1 | A | 65.53 | 98.30 | 1.25 | 0.77 | 0.01 |
| 3 | 1.59 | 0.14 | 0.79 | A | 225.92 | 338.88 | 9.14 | 1.62 | 0.10 |
| 4 | 0.99 | 0.02 | ~1 | A | 47.66 | 71.49 | 1.34 | 1.13 | 0.01 |

# APPENDIX E

## Background Development Reports

# WHITE ROSE (PHASE 3)

# PLAN OF SUBDIVISION

# TOWNSHIP OF SOUTHGATE (DUNDALK)

# GREY COUNTY

# TRAFFIC IMPACT STUDY

SEPTEMBER, 2020

TRITON ENGINEERING SERVICES LIMITED
Consulting Engineers

18 Robb Boulevard, Unit 8
Orangeville, Ontario
L9W 3L2
Tel: (519) 941-0330
Fax: (519) 941-1830
ORANGEVILLE X FERGUS X GRAVENHURST X HARRISTON

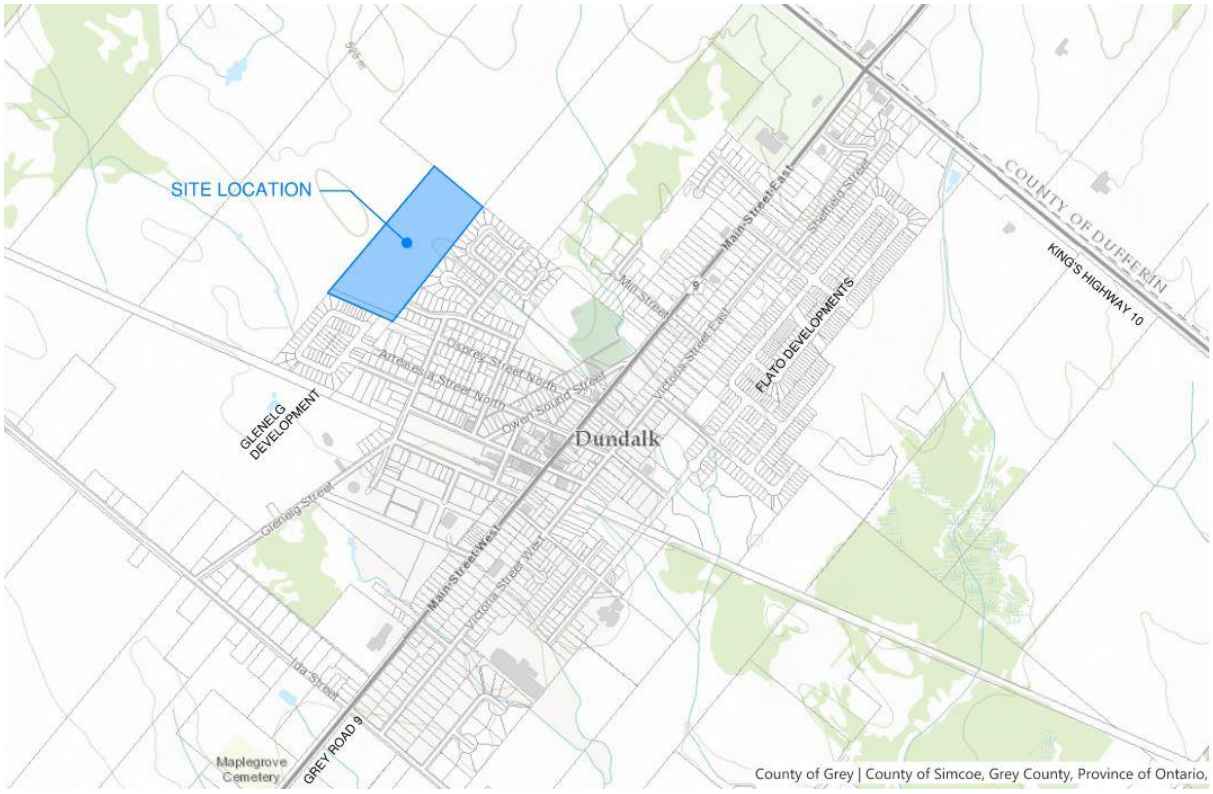
# 1.0 INTRODUCTION

Triton Engineering Services Limited (TESL) has been retained by White Rose Park to prepare a Traffic Impact Study (TIS) in support of a Draft Plan Application for a proposed residential development located in the Community of Dundalk, Township of Southgate. The purpose of this study is to address the impact of this development on Grey Road 9 (Main Street East) and to determine what road and intersection improvements may be required.

# 2.0 EXISTING CONDITIONS

## 2.1 Road Network

The proposed site is located on the northwest side of Dundalk at the end of Bradley Street. The location of the proposed site is shown on the Key Plan below.




Key Plan

The road network in Dundalk has a skewed orientation. To provide clarity throughout this study, King's Highway 10, Osprey Street, Artemesia Street, Proton Street, Dundalk Street, and Ida Street have been designated as north-south roads and Glenelg Street and Grey Road 9 (Main Street) have been designated as east-west roads.

## 3.0 PROPOSED DEVELOPMENT

MHBC have provided a draft plan of subdivision, enclosed in Appendix A.

The proposed development consists of 33 single-family dwellings, 24 townhouses, and 34 senior dwellings. The development has two proposed accesses, with 'Street A' connecting to Todd Crescent (Phase 1/2 of White Rose Park) and 'Street B' connecting to the north end of Bradley Street.

## 4.0 EXISTING TRAFFIC

Weekday morning and afternoon peak period traffic counts were undertaken as part of the Glenelg Residential Subdivision TIS in 2018 by C.F. Crozier & Associates Inc. (Crozier) at the intersection of Glenelg Street and Ida Street, the intersection of Grey Road 9 and Ida Street, and the intersection of Grey Road 9 and Dundalk Street. Since these counts were undertaken, there have been no major developments in the surrounding area and are considered acceptable. The traffic volumes were converted into 2020 existing traffic volumes by applying a 1.5% growth rate. This growth rate is consistent with the Glenelg development TIS and the Flato development TIS conducted in 2016 by Crozier.

A traffic count was undertaken at the intersection of Owen Sound Street and Grey Road 9 during the morning and afternoon peak periods on September 8, 2020. Traffic counts were not undertaken at the Proton Street and Artemesia Street intersections with Grey Road 9 as the increase to traffic volumes generated by White Rose Park at these intersections is expected to be very minor, as shown in Figure 5. It is assumed that if increased traffic volumes can be accommodated by the Dundalk Street and Grey Road 9 intersection, then the Proton Street and Artemesia Street intersections will also be able to accommodate the increased traffic volumes.

The existing peak hours for the four intersections and their respective traffic volumes are illustrated on Figure 1 and Table 1 lists the peak hours for each traffic count.

**Table 1: Peak Hours**

| Intersection | Peak Hour |
|---|---|
| Ida Street and Glenelg Street | 8:00-9:00 am |
| | 4:15-5:15 pm |
| Grey Road 9 and Ida Street | 7:45-8:45 am |
| | 5:00-6:00 pm |
| Grey Road 9 and Dundalk Street | 8:00-9:00 am |
| | 5:00-6:00 pm |
| Grey Road 9 and Owen Sound Street | 8:00-9:00 am |
| | 4:15-5:15 pm |

| Intersection | Movement | Level of Service (Delay, s) | |
|---|---|---|---|
| | | Weekday AM | Weekday PM |
| **Grey Road 9 and Owen Sound Street (Unsignalized)** | EB left-thru<br>WB thru-right<br>SB left-right | A (0.1)<br>A (0.0)<br>B (14.0) | A (0.1)<br>A (0.0)<br>C (17.4) |

The levels of service remain consistent for most movements due to the increase in traffic volumes during the 2025 and 2030 years with slightly increased delays. The northbound movement at the Ida Street and Grey Road 9 intersection operates at a LOS 'B' during the 2025 AM peak hour, the southbound movement at the Grey Road 9 and Dundalk Street operates at a LOS 'B' during the 2025 AM and PM peak hours, and the southbound movement at the Grey Road 9 and Owen Sound Street intersection operates at a LOS 'C' during the 2025 PM peak hour. All movements are still operating with acceptable delays.

# 6.0 SITE GENERATED TRAFFIC

## 6.1 General

Trip generation is forecast for future developments from studies of similar developments. The *Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition* was used in this analysis. Trips generated from residential condominium/townhouse land uses are considered primary trips.

## 6.2 Trip Generation

The ITE Code and the calculated number of trips generated by the development are shown in Table 5.

**Table 5: Trip Generation Codes and Distribution**

| Land Use | ITE Code | Description | Trips Generated per Unit | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Weekday AM | | | Weekday PM | | |
| | | | Total | Entering | Exiting | Total | Entering | Exiting |
| Residential | 210 | Single-Family Detached Housing | 31 | 8 | 23 | 36 | 23 | 13 |
| Residential | 230 | Residential Condominium/ Townhouse | 17 | 3 | 14 | 19 | 13 | 6 |
| Residential | 252 | Senior Adult Housing – Attached | 5 | 2 | 3 | 6 | 5 | 1 |
| **Development Total** | | | **53** | **13** | **40** | **61** | **41** | **20** |

The trip distribution used by the Glenelg and Flato Developments was applied to the White Rose Phase 3 development and is described below:

- 60% to/from Highway 10 via the Owen Sound Street/Grey Road 9 intersection;
- 10% to/from the north via the Ida Street/Glenelg Street intersection;
- 10% to/from the west via Dundalk Street and Grey Road 9; and,
- 20% to/from downtown Dundalk via Dundalk Street, Proton Street, Artemesia Street, and Osprey Street.

This distribution is illustrated on Figure 4 and the trips assigned to the road network is illustrated on Figure 5.

## 7.0 FUTURE TRAFFIC

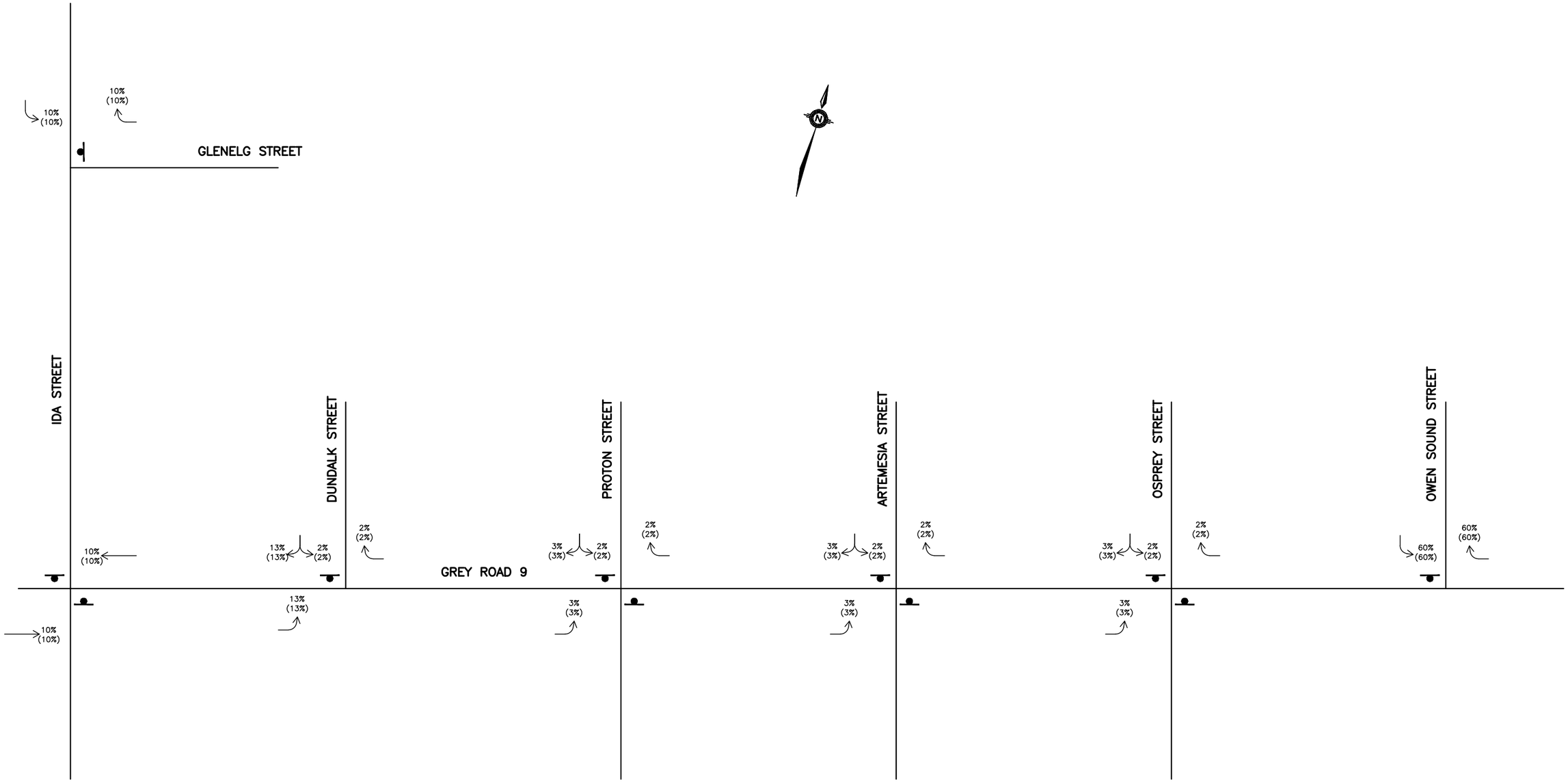
The total development generated traffic was added to the 2025 and 2030 background traffic volumes to determine the total 2025 and 2030 future peak hour traffic, as illustrated in Figures 6 and 7, respectively.

### 7.1 Level of Service Analysis

A level of service analysis was carried out to determine the impact of the trips generated by the development on the existing intersections during the Weekday AM and PM peak hours. The detailed capacity analyses are included in Appendix C. Table 6 and Table 7 summarize the future levels of service for 2025 and 2030 respectively.

**Table 6: 2025 Future Traffic Level of Service**

| Intersection | Movement | Level of Service (Delay, s) | |
|---|---|---|---|
| | | Weekday AM | Weekday PM |
| **Ida Street and Glenelg Street (Unsignalized)** | EB left-right<br>NB thru-right<br>SB thru-left | A (8.8)<br>A (0.0)<br>A (2.7) | A (8.9)<br>A (0.0)<br>A (3.2) |
| **Ida Street and Grey Road 9 (Unsignalized)** | EB left-thru-right<br>WB left-thru-right<br>NB left-thru-right<br>SB left-thru-right | A (0.5)<br>A (1.7)<br>B (10.2)<br>B (11.4) | A (0.9)<br>A (0.7)<br>B (12.9)<br>B (13.3) |
| **Grey Road 9 and Dundalk Street (Unsignalized)** | EB left-thru<br>WB thru-right<br>SB left-right | A (0.7)<br>A (0.0)<br>B (12.6) | A (0.5)<br>A (0.0)<br>B (13.7) |
| **Grey Road 9 and Owen Sound Street (Unsignalized)** | EB left-thru<br>WB thru-right<br>SB left-right | A (0.1)<br>A (0.0)<br>B (14.2) | A (0.1)<br>A (0.0)<br>C (17.5) |

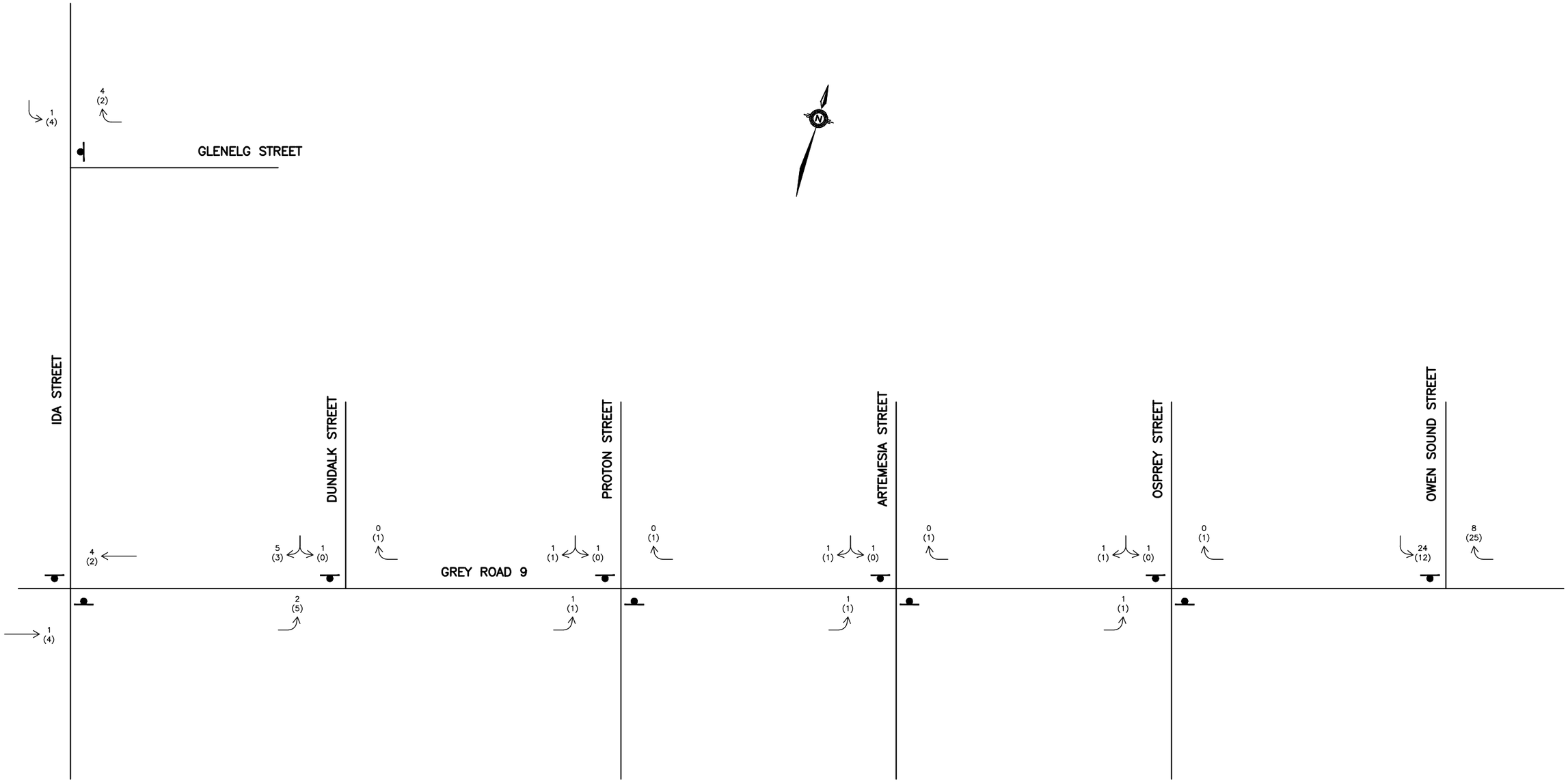



LEGEND:

- STOP CONTROL
- TRAFFIC FLOW
- 25 (25) am Peak pm Peak TRAFFIC VOLUMES
- TRAFFIC SIGNALS
- EXISTING ROAD
- PROPOSED ENTRANCE

TRITON ENGINEERING SERVICES LIMITED
Consulting Engineers

FIGURE 4:
DEVELOPMENT PEAK HOUR TRIP ASSIGNMENT
(NOT TO SCALE)




LEGEND:

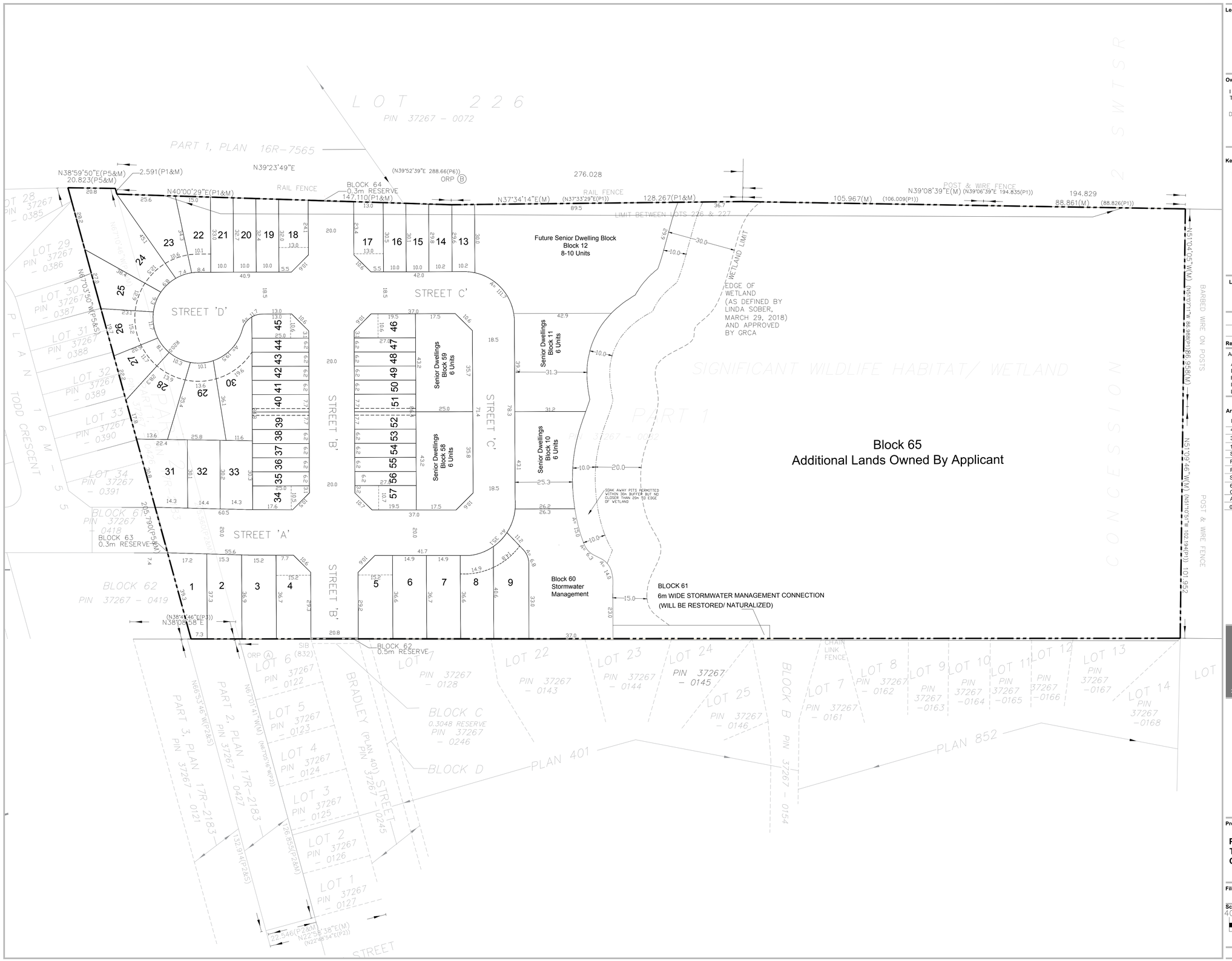
| | | | |
|---|---|---|---|
| STOP CONTROL | 25 am Peak<br>(25) pm Peak TRAFFIC VOLUMES | | EXISTING ROAD |
| TRAFFIC FLOW | | TRAFFIC SIGNALS | PROPOSED ENTRANCE |

TRITON ENGINEERING SERVICES LIMITED
Consulting Engineers

FIGURE 5:
DEVELOPMENT PEAK HOUR TRIP DISTRIBUTION
(NOT TO SCALE)

# APPENDIX A

# Draft Plan of Subdivision




**Legal Description**

PART OF LOT 227, CONCESSION 2 SWTSR
PART 1 17R2183 AND AS IN R480846
(VILLAGE OF DUNDALK)
NOW IN THE TOWNSHIP OF SOUTHGATE
(GEOGRAPHIC TOWNSHIP OF PROTON)
COUNTY OF GREY

**Owner's Certificate**

I HEREBY AUTHORIZE MACNAUGHTON HERMSEN BRITTON CLARKSON PLANNING LIMITED TO SUBMIT THIS PLAN FOR APPROVAL.

DATE: _____ _____

DOMENIC DE PALMA
2570970 ONTARIO INC.

**Key Plan** NOT TO SCALE

Subject Site

**Legend**

| Revision No. | Date | Issued / Revision | By |
|---|---|---|---|

Additional Information Required Under Section 51(17) of the Planning Act R.S.O. 1990, c.P.13 as Amended

A. As Shown
B. As Shown
C. As Shown
D. Residential, Stormwater Management
E. As Shown
F. As Shown
G. As Shown
H. Municipal Water Supply
I. Listowel Silt Loam
J. As Shown
K. All Services As Required
L. As Shown

**Area Schedule**

| Description | Lots/Blocks | Units | Area |
|---|---|---|---|
| 40' (12.2m) Single Detached | 1-9,31-33 | 12 | 0.64ha (1.57ac) |
| 30' (10.0m) Single Detached | 13-30 | 18 | 0.80ha (1.98ac) |
| 19.5' (6.0m) Townhouses | 34-57 | 24 | 0.44ha (1.08ac) |
| Senior Dwelling Blocks (20' (6.2m)) | Block 10-11,58-,59 | 24 | 0.47ha (1.17ac) |
| Future Senior Dwelling Block | Block 12 | 8-10 | 0.36ha (0.89ac) |
| Roads | Street 'A' - Street 'D' | | 1.14ha (2.82ac) |
| Stormwater Management | Block 60 | | 0.19ha (0.48ac) |
| 6m Stormwater Management Connection | Block 61 | | 0.04ha (0.10ac) |
| Additional Lands Owned by Applicant | Block 65 | | 4.79ha (11.84ac) |
| 0.3m & 0.5m Reserve | Block 62-64 | | 0.01ha (0.02ac) |
| | | 86-88 | 8.88ha (21.94ac) |

White Rose Park


MHBC
PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE
230-7050 WESTON ROAD WOODBRIDGE, ON. L4L 8G7 | P: 905 761 5588 F: 905 761 5589 | WWW.MHBCPLAN.COM


| | |
|---|---|
| Date | May 11, 2020 |
| File No. | 13126B |
| Plan Scale | 1:750 |
| Drawn By | T.H. |
| Checked By | D.K & A.P. |
| Other | |

**Project**

**Part of Lot 227 Concession 2,
Township of Southgate,
County of Grey**

North

**File Name** DRAFT PLAN OF SUBDIVISION

**Dwg No.** 1 of 1

**Scale Bar**

40 0 40 80

MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

N:\13126\B – Dundalk\2020\06. June\Draft Plan\CAD\8876 WHITE ROSE June 04 2020–C.dwg

# APPENDIX F

## ITE 11th Edition Excerpts

# Land Use: 210
# Single-Family Detached Housing

## Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

## Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

## Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

## Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

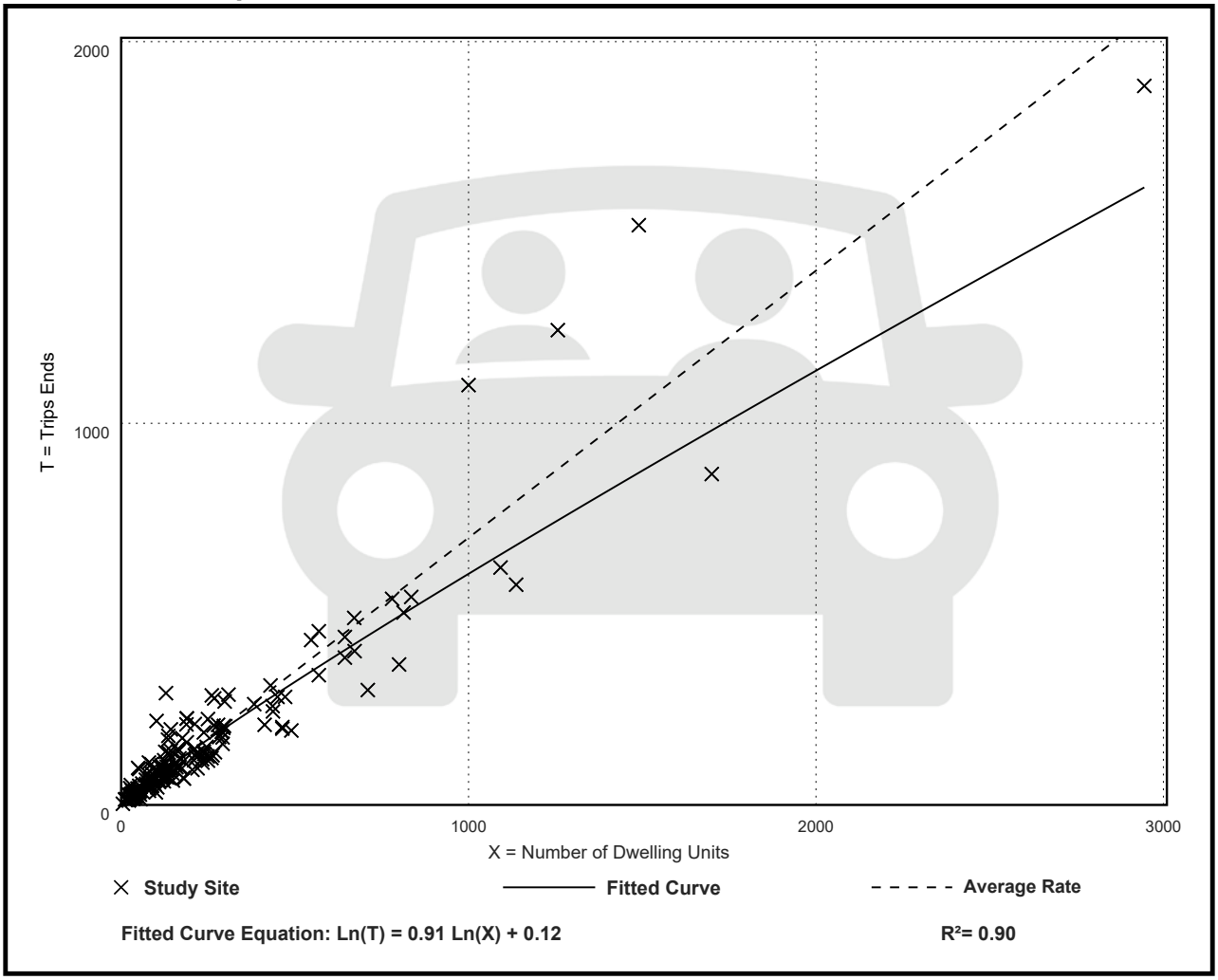
# Single-Family Detached Housing
# (210)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 192
Avg. Num. of Dwelling Units: 226
Directional Distribution: 26% entering, 74% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.70 | 0.27 - 2.27 | 0.24 |

## Data Plot and Equation



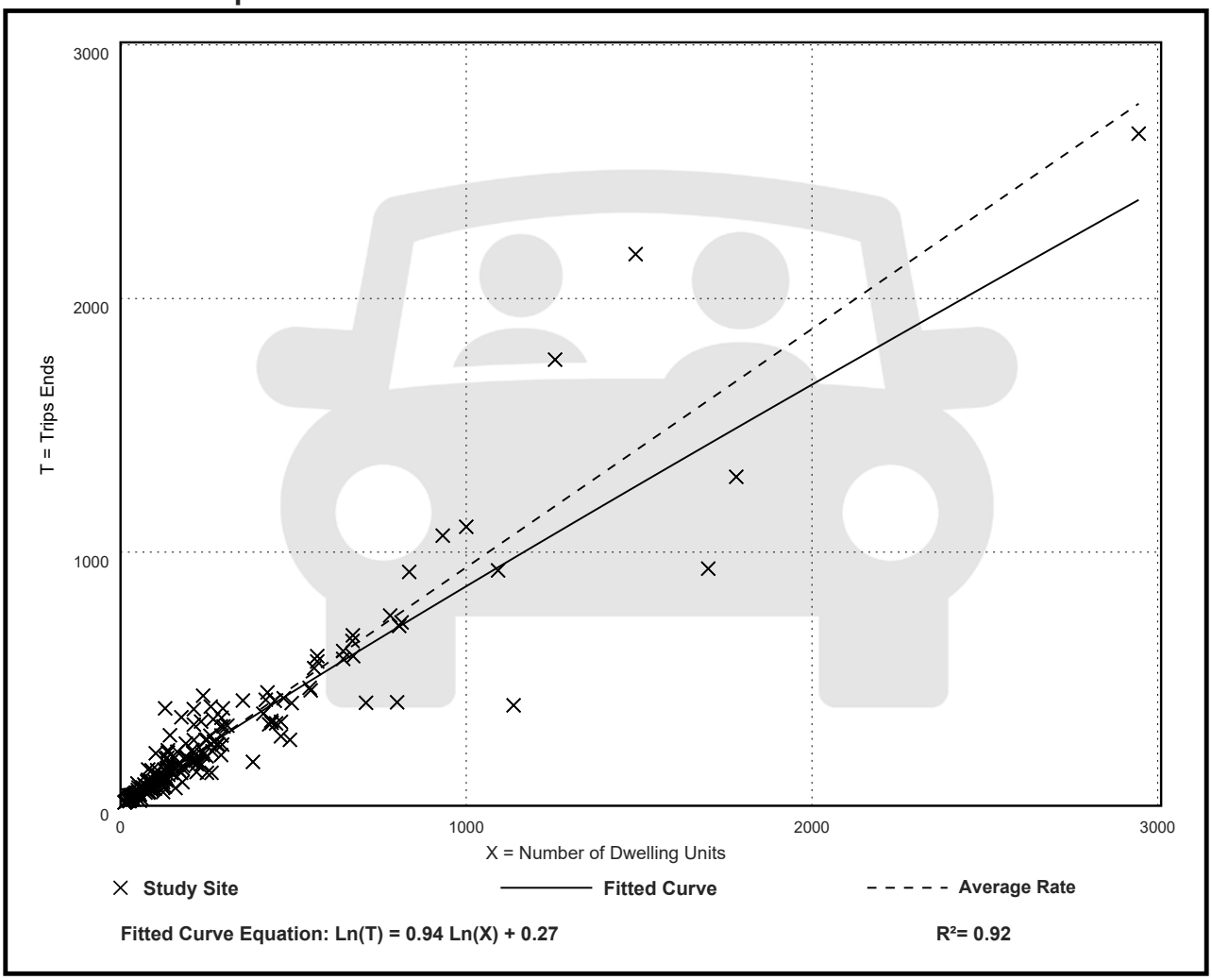
# Single-Family Detached Housing
# (210)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.94 | 0.35 - 2.98 | 0.31 |

## Data Plot and Equation



# Land Use: 215
# Single-Family Attached Housing

## Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

## Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

## Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

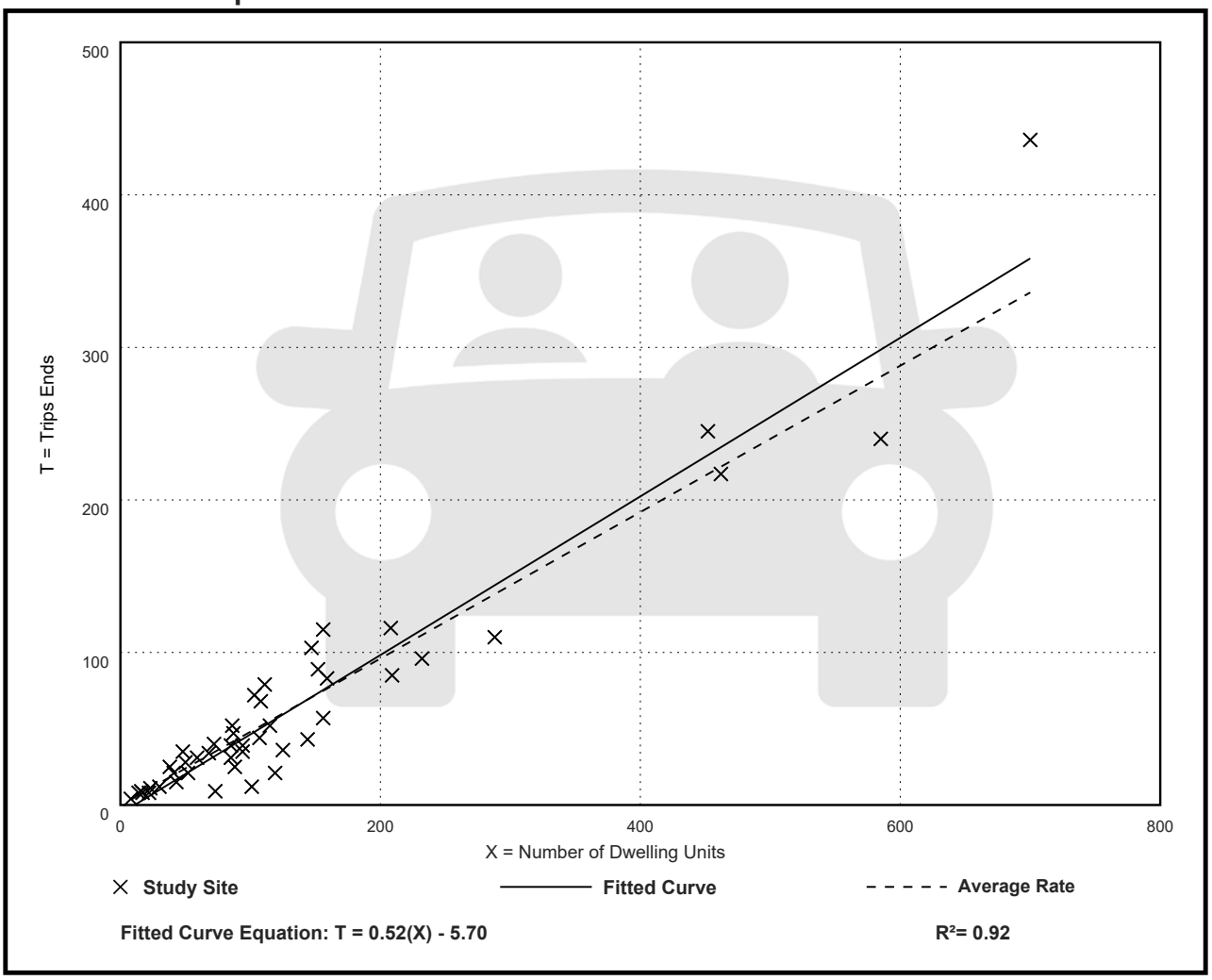
# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Dwelling Units: 135
Directional Distribution: 31% entering, 69% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.48 | 0.12 - 0.74 | 0.14 |

## Data Plot and Equation



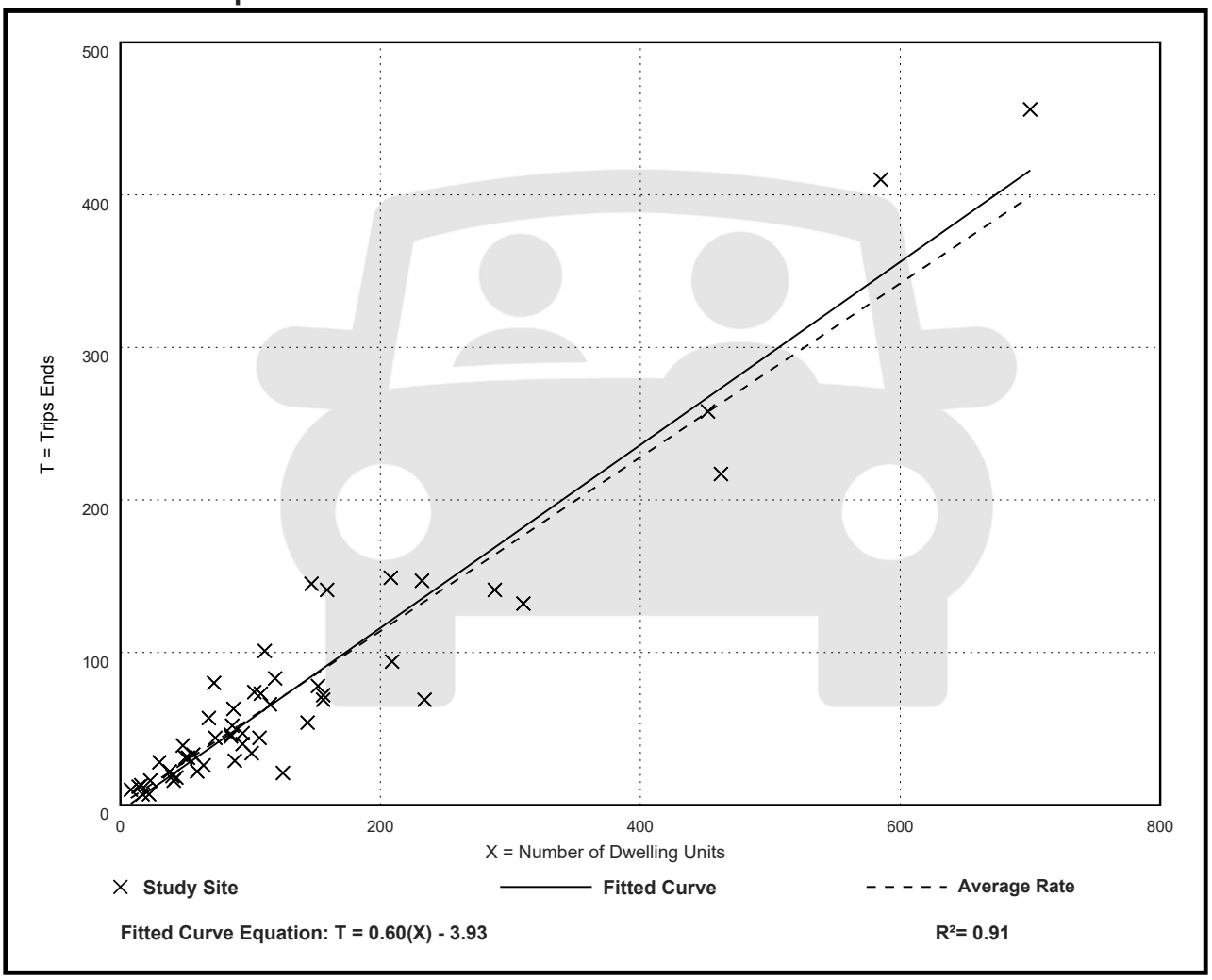
# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 57% entering, 43% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.57 | 0.17 - 1.25 | 0.18 |

## Data Plot and Equation



# APPENDIX G

## OTM Book 12 Signal Justification 1-3

# Input Data Sheet

Analysis Sheet | Results Sheet | Proposed Collision

GO TO Justification:

What are the intersecting roadways? Dundalk and Main Street

What is the direction of the Main Road street? East-West

When was the data collected? 2032 FT

## Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road? 1

b.- Number of lanes on the Minor Road? 1

c.- How many approaches? 3

d.- What is the operating environment? Urban  **Population >= 10,000  AND  Speed < 70 km/hr**

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

| Hour Ending | Main Eastbound Approach | | | Minor Northbound Approach | | | Main Westbound Approach | | | Minor Southbound Approach | | | Pedestrians Crossing Main Road |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| 7:00 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 77 | 6 | 5 | 0 | 3 | 0 |
| 8:00 | 7 | 98 | 0 | 0 | 0 | 0 | 0 | 91 | 5 | 10 | 0 | 11 | 2 |
| 9:00 | 21 | 156 | 0 | 0 | 0 | 0 | 0 | 136 | 13 | 13 | 0 | 39 | 12 |
| 12:00 | 9 | 116 | 0 | 0 | 0 | 0 | 0 | 98 | 8 | 13 | 0 | 15 | 3 |
| 13:00 | 95 | 202 | 0 | 0 | 0 | 0 | 0 | 174 | 11 | 14 | 0 | 23 | 36 |
| 16:00 | 39 | 206 | 0 | 0 | 0 | 0 | 0 | 199 | 17 | 10 | 0 | 34 | 12 |
| 17:00 | 26 | 186 | 0 | 0 | 0 | 0 | 0 | 174 | 12 | 9 | 0 | 26 | 8 |
| 18:00 | 43 | 128 | 0 | 0 | 0 | 0 | 0 | 93 | 23 | 8 | 0 | 8 | 8 |
| **Total** | **240** | **1,164** | **0** | **0** | **0** | **0** | **0** | **1,042** | **95** | **82** | **0** | **159** | **81** |

## Justification 5: Collision Experience

| Preceding Months | Number of Collisions* |
|---|---|
| 1-12 | 0 |
| 13-24 | 0 |
| 25-36 | 0 |

* Include only collisions that are susceptable to correction through the installation of traffic signal control

## Justification 6: Pedestrian Volume

a.- Please fill in table below summarizing total pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

| | Zone 1 | | Zone 2 | | Zone 3 (if needed) | | Zone 4 (if needed) | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | |
| **Total 8 hour pedestrian volume** | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Factored 8 hour pedestrian volume** | 81 | | 0 | | 0 | | 0 | | |
| **% Assigned to crossing rate** | 23% | | 34% | | 30% | | 100% | | |
| **Net 8 Hour Pedestrian Volume at Crossing** | | | | | | | | | 19 |
| **Net 8 Hour Vehicular Volume on Street Being Crossed** | | | | | | | | | 2,000 |

b.- Please fill in table below summarizing delay to pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

| | Zone 1 | | Zone 2 | | Zone 3 (if needed) | | Zone 4 (if needed) | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | |
| **Total 8 hour pedestrian volume** | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total 8 hour pedestrians delayed greater than 10 seconds** | 10 | 10 | 1 | 6 | 2 | 4 | 0 | 0 | |
| **Factored volume of total pedestrians** | 81 | | 0 | | 0 | | 0 | | |
| **Factored volume of delayed pedestrians** | 30 | | 8 | | 8 | | 0 | | |
| **% Assigned to Crossing Rate** | 23% | | 34% | | 30% | | 100% | | |
| **Net 8 Hour Volume of Total Pedestrians** | | | | | | | | | 19 |
| **Net 8 Hour Volume of Delayed Pedestrians** | | | | | | | | | 12 |

# Analysis Sheet

Input Sheet | Results Sheet | Proposed Collision

GO TO Justification:

Intersection: Dundalk and Main Street

Count Date: 2032 FT

## Justification 1: Minimum Vehicle Volumes

**Restricted Flow Urban Conditions**

| Justification | Guidance Approach Lanes | | | | Percentage Warrant | | | | | | | | Total Across | Section Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 Lanes | | 2 or More Lanes | | Hour Ending | | | | | | | | | |
| Flow Condition | FREE FLOW ☐ | RESTR. FLOW ☑ | FREE FLOW ☐ | RESTR. FLOW ☐ | 7:00 | 8:00 | 9:00 | 12:00 | 13:00 | 16:00 | 17:00 | 18:00 | | |
| 1A | 480 | 720 | 600 | 900 | 163 | 222 | 378 | 259 | 519 | 505 | 433 | 303 | | |
| | COMPLIANCE % | | | | 23 | 31 | 53 | 36 | 72 | 70 | 60 | 42 | 386 | 48 |
| 1B | 180 | 255 | 180 | 255 | 8 | 21 | 52 | 28 | 37 | 44 | 35 | 16 | | |
| | COMPLIANCE % | | | | 3 | 8 | 20 | 11 | 15 | 17 | 14 | 6 | 95 | 12 |

| | | | |
|---|---|---|---|
| **Restricted Flow Signal Justification 1:** | Both 1A and 1B 100% Fullfilled each of 8 hours | Yes ☐ | No ☑ |
| | Lesser of 1A or 1B at least 80% fulfilled each of 8 hours | Yes ☐ | No ☑ |

## Justification 2: Delay to Cross Traffic

**Restricted Flow Urban Conditions**

| Justification | Guidance Approach Lanes | | | | Percentage Warrant | | | | | | | | Total Across | Section Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 lanes | | 2 or More lanes | | Hour Ending | | | | | | | | | |
| Flow Condition | FREE FLOW ☐ | RESTR. FLOW ☑ | FREE FLOW ☐ | RESTR. FLOW ☐ | 7:00 | 8:00 | 9:00 | 12:00 | 13:00 | 16:00 | 17:00 | 18:00 | | |
| 2A | 480 | 720 | 600 | 900 | 155 | 201 | 326 | 231 | 482 | 461 | 398 | 287 | | |
| | COMPLIANCE % | | | | 22 | 28 | 45 | 32 | 67 | 64 | 55 | 40 | 353 | 44 |
| 2B | 50 | 75 | 50 | 75 | 5 | 12 | 25 | 16 | 50 | 22 | 17 | 16 | | |
| | COMPLIANCE % | | | | 7 | 16 | 33 | 21 | 67 | 29 | 23 | 21 | 217 | 27 |

| | | | |
|---|---|---|---|
| **Restricted Flow Signal Justification 2:** | Both 2A and 2B 100% Fullfilled each of 8 hours | Yes ☐ | No ☑ |
| | Lesser of 2A or 2B at least 80% fulfilled each of 8 hours | Yes ☐ | No ☑ |

## Justification 3: Combination

**Combination Justification 1 and 2**

| | Justification Satisfied 80% or More | | | Two Justifications Satisfied 80% or More | |
|---|---|---|---|---|---|
| Justification 1 | Minimun Vehicular Volume | YES ☐ | NO ☑ | YES ☐ | NO ☑ |
| Justification 2 | Delay Cross Traffic | YES ☐ | NO ☑ | | NOT JUSTIFIED |

## Justification 4: Four Hour Volume

| Justification | Time Period | Total Volume of Both Approaches (Main) X | Heaviest Minor Approach Y (actual) | Required Value Y (warrant threshold) | Average % Compliance | Overall % Compliance |
|---|---|---|---|---|---|---|
| Justification 4 | 9:00 | 326 | 52 | 346 | 15 % | 14 % |
| | 13:00 | 482 | 37 | 270 | 14 % | |
| | 16:00 | 461 | 44 | 280 | 16 % | |
| | 17:00 | 398 | 35 | 309 | 11 % | |

# Results Sheet

Input Sheet | Analysis Sheet | Proposed Collision

Intersection: Dundalk and Main Street

Count Date: 2032 FT

## Summary Results

| Justification | | | Compliance | | Signal Justified? YES | Signal Justified? NO |
|---|---|---|---|---|---|---|
| 1. Minimum Vehicular Volume | A | Total Volume | 48 | % | ☐ | ☑ |
| | B | Crossing Volume | 12 | % | | |
| 2. Delay to Cross Traffic | A | Main Road | 44 | % | ☐ | ☑ |
| | B | Crossing Road | 27 | % | | |
| 3. Combination | A | Justificaton 1 | 12 | % | ☐ | ☑ |
| | B | Justification 2 | 27 | % | | |
| 4. 4-Hr Volume | | | 14 | % | ☐ | ☑ |
| 5. Collision Experience | | | 0 | % | ☐ | ☑ |
| 6. Pedestrians | A | Volume | Justification not met | | ☐ | ☑ |
| | B | Delay | Justification not met | | | |

| | | | | | |
|---|---|---|---|---|---|
| Major Road: | County Road 9 | Condition: | Free Flow | Date: | 27-Jul-10 |
| Minor Road: | Ida Street | Major Rd. Lanes: | 1 | Project No.: | 324-2840 |
| Horizon Year: | 2032 Future total | Intersection Type: | Existing | Analyst: | Emma Howlett |

**OTM Book 12 - Table 19 - Justification 7 - Projected Volumes (Traffic Signal Justification for Future Development - Traffic Impact Stud**

| JUSTIFICATION | DESCRIPTION | MINIMUM REQUIREMENT 1 LANE HIGHWAYS | | MINIMUM REQUIREMENT 2 OR MORE LANE | | COMPLIANCE | |
|---|---|---|---|---|---|---|---|
| | | | | | | Sectional | |
| | | Free Flow | Restricted Flow | Free Flow | Restricted Flow | Numerical | Percentage |
| 1. Minimum Vehicular Volume | A. Vehicle Volume, All Approaches (Avg. Hour) | 576 | 864 | 720 | 1080 | 496 | 86% |
| | B. Vehicle Volume, Along Minor Streets (Avg. Hour) | 144 | 204 | 144 | 204 | 193 | 134% |
| 2. Delay to Cross Traffic | A. Vehicle Volume, Major Street (Avg. Hour) | 576 | 864 | 720 | 1080 | 302 | 52% |
| | B. Combined Vehicle and Pedestrian Volume Crossing Artery From Minor Streets (Avg. Hour) | 60 | 90 | 144 | 204 | 149 | 248% |

Note:
Existing Intersection Requires 120 % Justification
Proposed Intersection Requires 150 % Justication

**Signal Justification 7 Met:** [ ] **Yes** [X] **No**

:

**ies)**

| |
|---|
| Entire Percentage |
| 86% |
| 52% |

# Input Data Sheet

Analysis Sheet | Results Sheet | Proposed Collision

GO TO Justification:

What are the intersecting roadways? Dundalk and Main Street

What is the direction of the Main Road street? East-West

When was the data collected? 2032 FT

## Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road? 1

b.- Number of lanes on the Minor Road? 1

c.- How many approaches? 3

d.- What is the operating environment? Urban  Population >= 10,000  AND  Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

| Hour Ending | Main Eastbound Approach | | | Minor Northbound Approach | | | Main Westbound Approach | | | Minor Southbound Approach | | | Pedestrians Crossing Main Road |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| 7:00 | 1 | 288 | 0 | 0 | 0 | 0 | 0 | 136 | 19 | 73 | 0 | 0 | 0 |
| 8:00 | 0 | 345 | 0 | 0 | 0 | 0 | 0 | 198 | 53 | 66 | 0 | 0 | 6 |
| 9:00 | 1 | 432 | 0 | 0 | 0 | 0 | 0 | 281 | 88 | 88 | 0 | 0 | 10 |
| 12:00 | 4 | 373 | 0 | 0 | 0 | 0 | 0 | 237 | 81 | 110 | 0 | 0 | 2 |
| 13:00 | 3 | 430 | 0 | 0 | 0 | 0 | 0 | 383 | 211 | 93 | 0 | 5 | 59 |
| 16:00 | 7 | 360 | 0 | 0 | 0 | 0 | 0 | 417 | 208 | 90 | 0 | 3 | 21 |
| 17:00 | 17 | 348 | 0 | 0 | 0 | 0 | 0 | 378 | 249 | 98 | 0 | 3 | 30 |
| 18:00 | 22 | 262 | 0 | 0 | 0 | 0 | 0 | 243 | 276 | 90 | 0 | 10 | 19 |
| **Total** | **55** | **2,838** | **0** | **0** | **0** | **0** | **0** | **2,273** | **1,185** | **708** | **0** | **21** | **147** |

## Justification 5: Collision Experience

| Preceding Months | Number of Collisions* |
|---|---|
| 1-12 | 0 |
| 13-24 | 0 |
| 25-36 | 0 |

* Include only collisions that are susceptable to correction through the installation of traffic signal control

## Justification 6: Pedestrian Volume

a.- Please fill in table below summarizing total pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

| | Zone 1 | | Zone 2 | | Zone 3 (if needed) | | Zone 4 (if needed) | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | |
| **Total 8 hour pedestrian volume** | 0 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Factored 8 hour pedestrian volume** | 147 | | 0 | | 0 | | 0 | | |
| **% Assigned to crossing rate** | 23% | | 34% | | 30% | | 100% | | |
| **Net 8 Hour Pedestrian Volume at Crossing** | | | | | | | | | 34 |
| **Net 8 Hour Vehicular Volume on Street Being Crossed** | | | | | | | | | 2,000 |

b.- Please fill in table below summarizing delay to pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

| | Zone 1 | | Zone 2 | | Zone 3 (if needed) | | Zone 4 (if needed) | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | Assisted | Unassisted | |
| **Total 8 hour pedestrian volume** | 0 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total 8 hour pedestrians delayed greater than 10 seconds** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Factored volume of total pedestrians** | 147 | | 0 | | 0 | | 0 | | |
| **Factored volume of delayed pedestrians** | 0 | | 0 | | 0 | | 0 | | |
| **% Assigned to Crossing Rate** | 23% | | 34% | | 30% | | 100% | | |
| **Net 8 Hour Volume of Total Pedestrians** | | | | | | | | | 34 |
| **Net 8 Hour Volume of Delayed Pedestrians** | | | | | | | | | 0 |

# Analysis Sheet

Input Sheet | Results Sheet | Proposed Collision

GO TO Justification:

Intersection: Dundalk and Main Street  Count Date: 2032 FT

## Justification 1: Minimum Vehicle Volumes

**Restricted Flow Urban Conditions**

| Justification | Guidance Approach Lanes | | | | Percentage Warrant | | | | | | | | Total Across | Section Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 Lanes | | 2 or More Lanes | | Hour Ending | | | | | | | | | |
| Flow Condition | FREE FLOW ☐ | RESTR. FLOW ☑ | FREE FLOW ☐ | RESTR. FLOW ☐ | 7:00 | 8:00 | 9:00 | 12:00 | 13:00 | 16:00 | 17:00 | 18:00 | | |
| 1A | 480 | 720 | 600 | 900 | 517 | 662 | 890 | 805 | 1,125 | 1,085 | 1,093 | 903 | | |
| | COMPLIANCE % | | | | 72 | 92 | 100 | 100 | 100 | 100 | 100 | 100 | 764 | 95 |
| 1B | 180 | 255 | 180 | 255 | 73 | 66 | 88 | 110 | 98 | 93 | 101 | 100 | | |
| | COMPLIANCE % | | | | 29 | 26 | 35 | 43 | 38 | 36 | 40 | 39 | 286 | 36 |

**Restricted Flow Signal Justification 1:**

Both 1A and 1B 100% Fullfilled each of 8 hours — Yes ☐ No ☑

Lesser of 1A or 1B at least 80% fulfilled each of 8 hours — Yes ☐ No ☑

## Justification 2: Delay to Cross Traffic

**Restricted Flow Urban Conditions**

| Justification | Guidance Approach Lanes | | | | Percentage Warrant | | | | | | | | Total Across | Section Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 lanes | | 2 or More lanes | | Hour Ending | | | | | | | | | |
| Flow Condition | FREE FLOW ☐ | RESTR. FLOW ☑ | FREE FLOW ☐ | RESTR. FLOW ☐ | 7:00 | 8:00 | 9:00 | 12:00 | 13:00 | 16:00 | 17:00 | 18:00 | | |
| 2A | 480 | 720 | 600 | 900 | 444 | 596 | 802 | 695 | 1,027 | 992 | 992 | 803 | | |
| | COMPLIANCE % | | | | 62 | 83 | 100 | 97 | 100 | 100 | 100 | 100 | 741 | 93 |
| 2B | 50 | 75 | 50 | 75 | 73 | 72 | 98 | 112 | 152 | 111 | 128 | 109 | | |
| | COMPLIANCE % | | | | 97 | 96 | 100 | 100 | 100 | 100 | 100 | 100 | 793 | 99 |

**Restricted Flow Signal Justification 2:**

Both 2A and 2B 100% Fullfilled each of 8 hours — Yes ☐ No ☑

Lesser of 2A or 2B at least 80% fulfilled each of 8 hours — Yes ☑ No ☐

## Justification 3: Combination

**Combination Justification 1 and 2**

| | Justification Satisfied 80% or More | | | Two Justifications Satisfied 80% or More | |
|---|---|---|---|---|---|
| Justification 1 | Minimun Vehicular Volume | YES ☐ | NO ☑ | YES ☐ | NO ☑ |
| Justification 2 | Delay Cross Traffic | YES ☑ | NO ☐ | | NOT JUSTIFIED |

## Justification 4: Four Hour Volume

| Justification | Time Period | Total Volume of Both Approaches (Main) X | Heaviest Minor Approach Y (actual) | Required Value Y (warrant threshold) | Average % Compliance | Overall % Compliance |
|---|---|---|---|---|---|---|
| Justification 4 | 13:00 | 1,027 | 98 | 97 | 100 % | 88 % |
| | 16:00 | 992 | 93 | 104 | 90 % | |
| | 17:00 | 992 | 101 | 104 | 97 % | |
| | 18:00 | 803 | 100 | 151 | 66 % | |

# Results Sheet

Input Sheet | Analysis Sheet | Proposed Collision

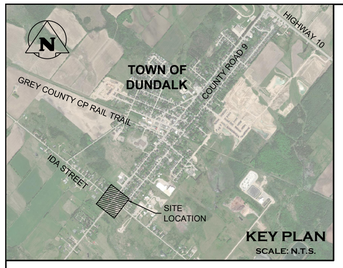
Intersection: Dundalk and Main Street  Count Date: 2032 FT

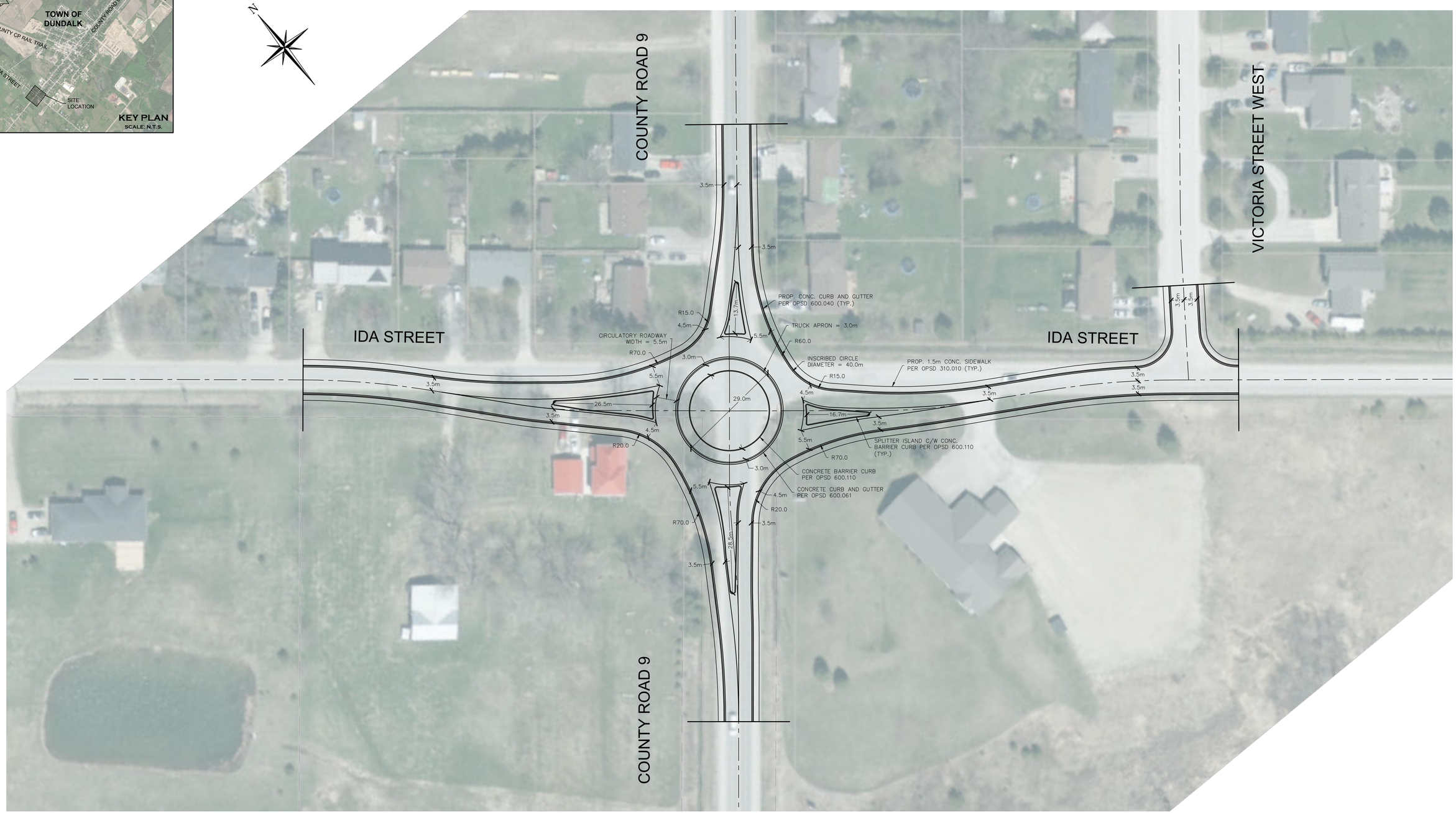
## Summary Results

| Justification | | | Compliance | Signal Justified? YES | Signal Justified? NO |
|---|---|---|---|---|---|
| 1. Minimum Vehicular Volume | A | Total Volume | 95 % | ☐ | ☑ |
| | B | Crossing Volume | 36 % | | |
| 2. Delay to Cross Traffic | A | Main Road | 93 % | ☐ | ☑ |
| | B | Crossing Road | 99 % | | |
| 3. Combination | A | Justificaton 1 | 36 % | ☐ | ☑ |
| | B | Justification 2 | 93 % | | |
| 4. 4-Hr Volume | | | 88 % | ☐ | ☑ |
| 5. Collision Experience | | | 0 % | ☐ | ☑ |
| 6. Pedestrians | A | Volume | Justification not met | ☐ | ☑ |
| | B | Delay | Justification not met | | |

# APPENDIX H

## Ida Street and County Road 9 Roundabout Concept

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2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.
4. DO NOT SCALE THE DRAWINGS.
5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

TEMPORARY BENCHMARKS

TBM#1–
TBM#2–
TBM#3–

•••ADD REFERENCE TO SURVEY/SOURCE

Town

| No. | ISSUE | DATE: MMM/DD/YYYY |
|---|---|---|
| 1. | ISSUED FOR TOWN REVIEW | 08/22/2022 |

Engineer

PROFESSIONAL ENGINEERS ONTARIO

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Engineer

PROFESSIONAL ENGINEERS PROVINCE OF ONTARIO

Project

GLENELG EXPANSION LANDS
TOWN OF DUNDALK

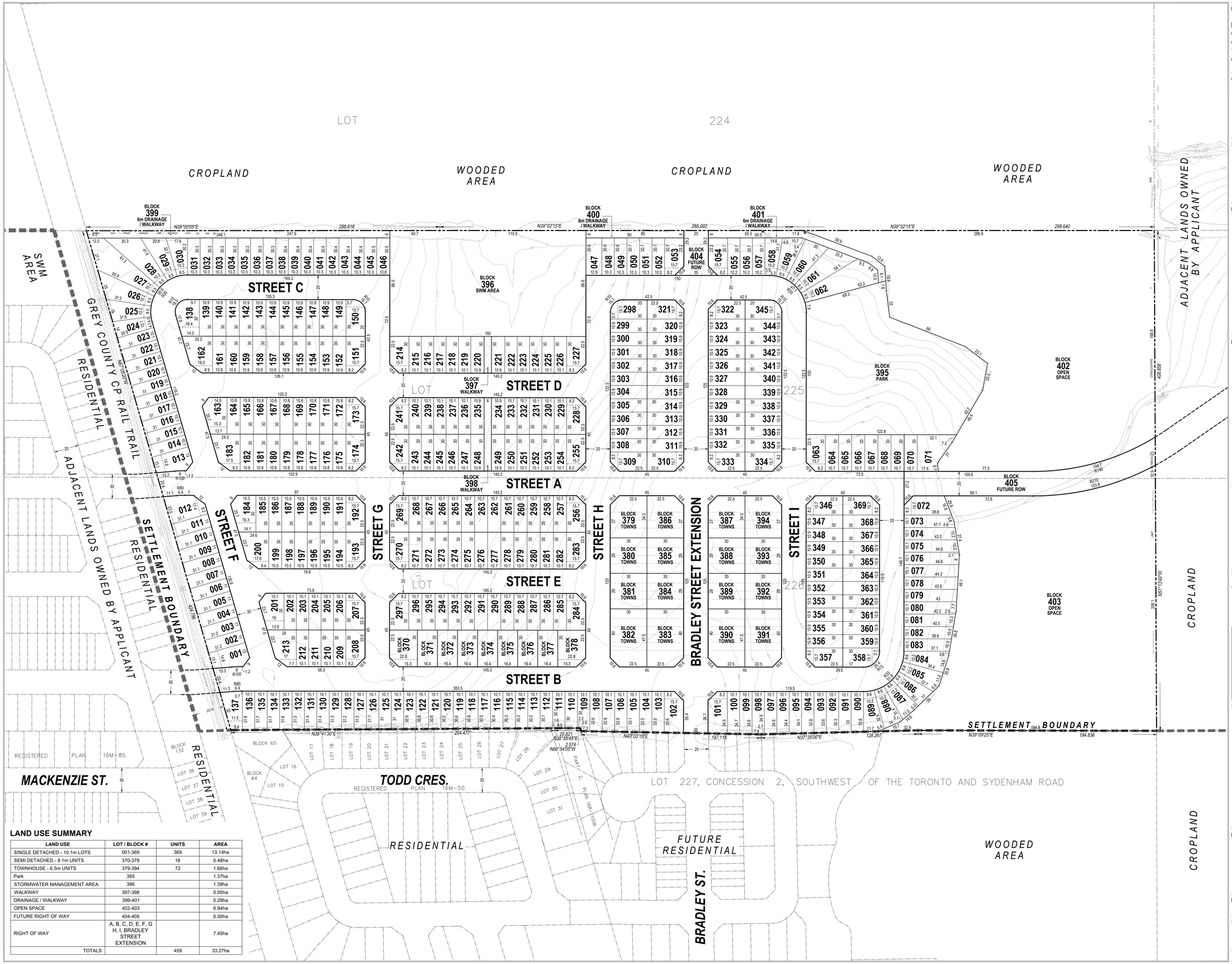
Drawing

CONCEPTUAL ROUNDABOUT PLAN

CROZIER CONSULTING ENGINEERS
ADMIRAL BUILDING
1 FIRST STREET, SUITE 200
COLLINGWOOD, ON, L9Y 1A1
705-446-3510 T
705-446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

| Drawn By | Design By | Project |
|---|---|---|
| DE | DE | 1060–5590 |
| Check By | Check By | Scale / Drawing |
| SH | MF | 1: 500 / FIG.1 |

# List of Figures




## LAND USE SUMMARY

| LAND USE | LOT / BLOCK # | UNITS | AREA |
|---|---|---|---|
| SINGLE DETACHED - 10.1m LOTS | 001-369 | 369 | 13.14ha |
| SEMI DETACHED - 8.1m UNITS | 370-378 | 18 | 0.48ha |
| TOWNHOUSE - 6.5m UNITS | 379-394 | 72 | 1.66ha |
| Park | 395 | | 1.37ha |
| STORMWATER MANAGEMENT AREA | 396 | | 1.39ha |
| WALKWAY | 397-398 | | 0.05ha |
| DRAINAGE / WALKWAY | 399-401 | | 0.29ha |
| OPEN SPACE | 402-403 | | 6.94ha |
| FUTURE RIGHT OF WAY | 404-405 | | 0.50ha |
| RIGHT OF WAY | A, B, C, D, E, F, G H, I, BRADLEY STREET EXTENSION | | 7.45ha |
| TOTALS | | 459 | 33.27ha |

**LEGAL DESCRIPTION**

PART OF LOTS 225 AND 226
CONCESSION 2, SOUTHWEST OF THE TORONTO AND SYDENHAM ROAD
GEOGRAPHIC TOWNSHIP OF PROTON
TOWNSHIP OF SOUTHGATE
COUNTY OF GREY

**OWNER'S CERTIFICATE**

I HEREBY AUTHORIZE MACNAUGHTON HERMSEN BRITTON CLARKSON PLANNING LIMITED TO SUBMIT THIS PLAN FOR APPROVAL.

DATE: AUGUST 18, 2022

SHAKIR REHMATULLAH - PRESIDENT
DUNDALK VILLAGE TWO INC.

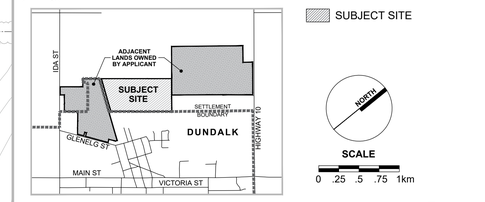
**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE: AUGUST 18, 2022

DAN DZALDOV - O.L.S.
SCHAEFFER DZALDOV BENNETT LTD.

**KEY PLAN**




**LEGEND**

- PROJECT BOUNDARY LINE
- RIGHT OF WAY LINE
- BLOCK LINE
- LOT LINE
- PARCEL FABRIC

| REVISION No. | DATE | ISSUED / REVISION | BY |
|---|---|---|---|

**ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT R.S.O. 1990 C.P.13 AS AMENDED**

A. AS SHOWN
B. AS SHOWN
C. AS SHOWN
D. 369 SINGLES, 18 SEMIS, & 72 TOWNHOUSES
E. AS SHOWN
F. AS SHOWN
G. AS SHOWN
H. MUNICIPAL WATER SUPPLY
I. LOAM/SILT LOAM
J. AS SHOWN
K. ALL SERVICES AS REQUIRED (WATER, SANITARY, STORMWATER, HYDRO)
L. AS SHOWN


113 COLLIER STREET
BARRIE, ON, L4M 1H2
P: 705 728 0045 F: 705 728 2010
WWW.MHBCPLAN.COM
PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
MHBC PLANNING


**STAMP**

| | |
|---|---|
| DATE | AUG. 18, 2022 |
| FILE No. | 15184AT |
| SCALE | 1:1,400 (ARCH D) |
| DRAWN BY | M.M. |
| CHECKED BY | K.C. |
| OTHER | |

**PROJECT**

## GLENELG PHASE 3

DUNDALK VILLAGE TWO INC.
3621 HIGHWAY 7 EAST, SUITE 503
MARKHAM, ON L3R 0G6
P:(905) 479-9292 F:(905) 429-9165
WWW.FLATOGROUP.COM

NORTH

**FILE NAME** DRAFT PLAN OF SUBDIVISION

**DWG No.** 1 of 1

**SCALE BAR**

0 7 14 21 28 35 52.5 70 105 140m

MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

N:\Southgate\15184AT\Drawings\Draft Plan\CAD\


Project

GLENELG PHASE 3
TOWNSHIP OF SOUTHGATE, COUNTY OF GREY

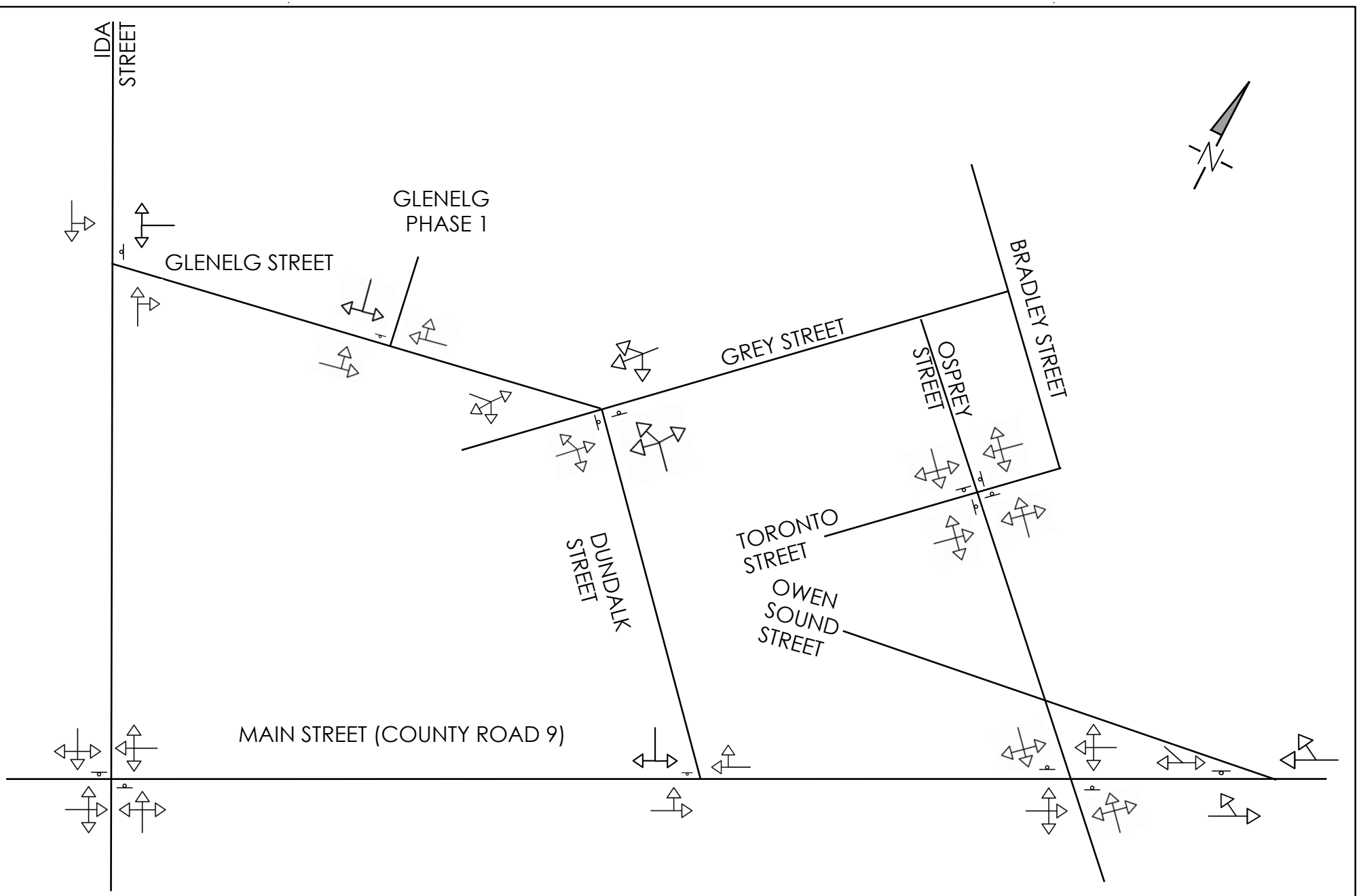
Drawing

SITE LOCATION PLAN

CROZIER
CONSULTING ENGINEERS
THE HARBOUREDGE BUILDING,
40 HURON STREET, SUITE 301,
COLLINGWOOD, ON L9Y 4R3
705 446-3510 T
705 446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

| Drawn By | Design By | Project |
|---|---|---|
| E.H. | E.H. | 1060-6220 |

| Scale | Date | Check By | Drawing |
|---|---|---|---|
| N.T.S. | 2022.08/15 | E.H. | FIG. 2 |




Legend

STOP CONTROL

Project

GLENELG PHASE 3
TOWNSHIP OF SOUTHGATE, COUNTY OF GREY

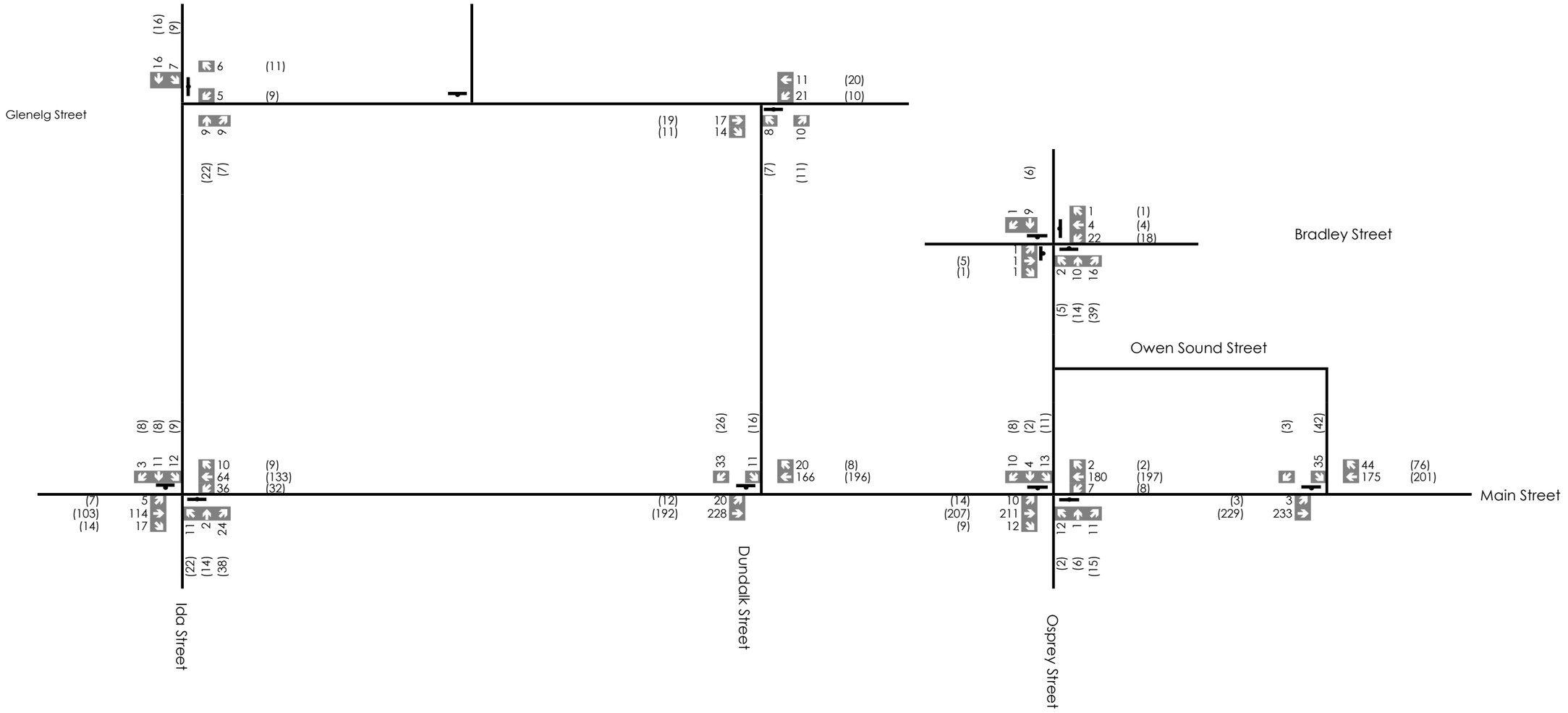
Drawing

EXISTING TRAFFIC CONTROLS AND LANE CONFIGURATION

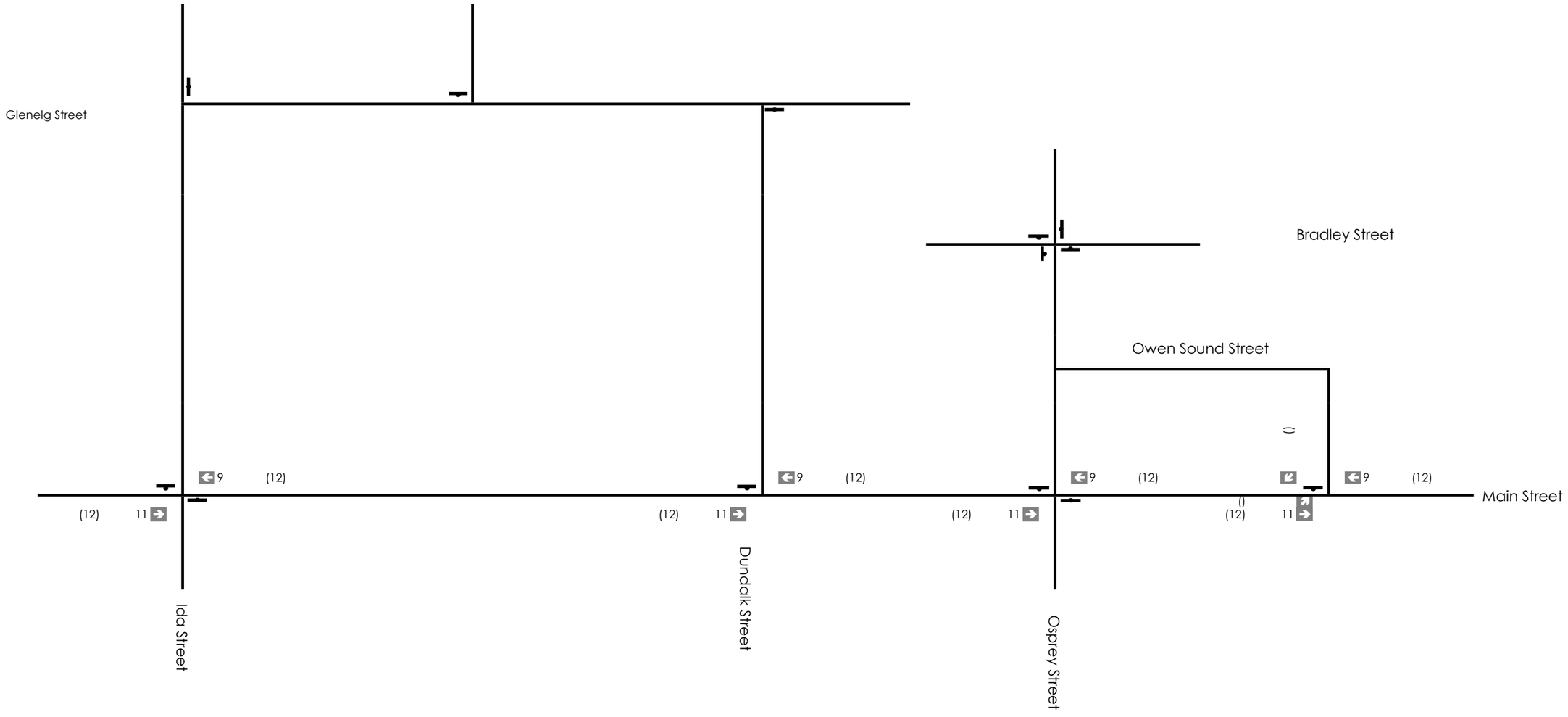
CROZIER CONSULTING ENGINEERS
THE HARBOUREDGE BUILDING,
40 HURON STREET, SUITE 301,
COLLINGWOOD, ON L9Y 4R3
705 446-3510 T
705 446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

| Drawn By | Design By | Project |
|---|---|---|
| E.H. | E.H. | 1060-6220 |

| Scale | Date | Check By | Drawing |
|---|---|---|---|
| N.T.S. | 2022.08/15 | E.H. | FIG. 3 |




| Legend | Glenelg Phase 3 | CROZIER CONSULTING ENGINEERS | Figure 4 |
|---|---|---|---|
| xx A.M. Peak Hour Traffic Volumes<br>(XX) P.M. Peak Hour Traffic Volumes<br>Stop Sign | Existing Traffic Volumes | | Project No. 1060-6220<br>Date. 2022/08/31<br>Analyst. E.H. |




**Legend**

xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Background Development: Edgewood Greens Commercial Trip Assignment**

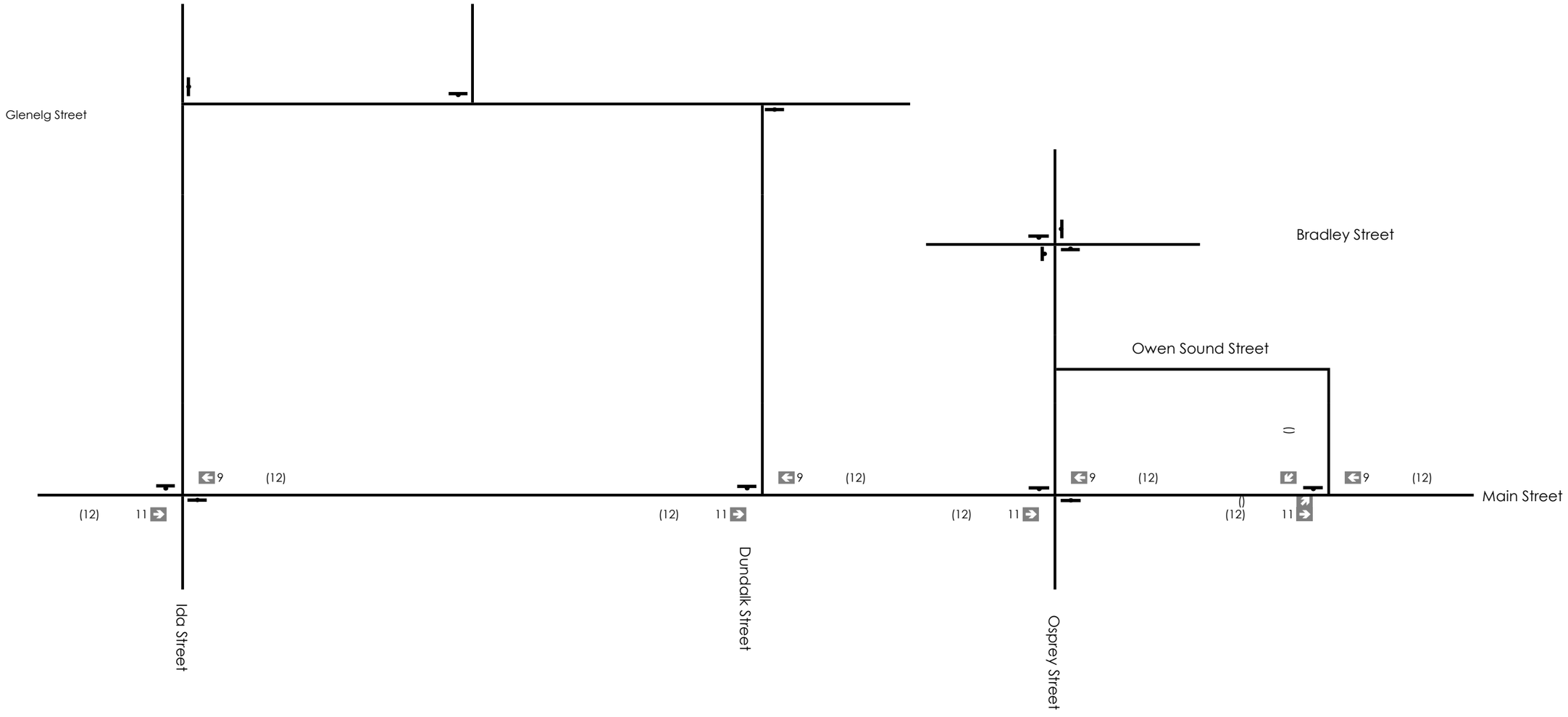
CROZIER CONSULTING ENGINEERS

**Figure 5**

Project No. 1060-6220

Date. 2022/08/31

Analyst. E.H.




**Legend**

xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Background Development: Edgewood Greens Residential Trip Assignment**

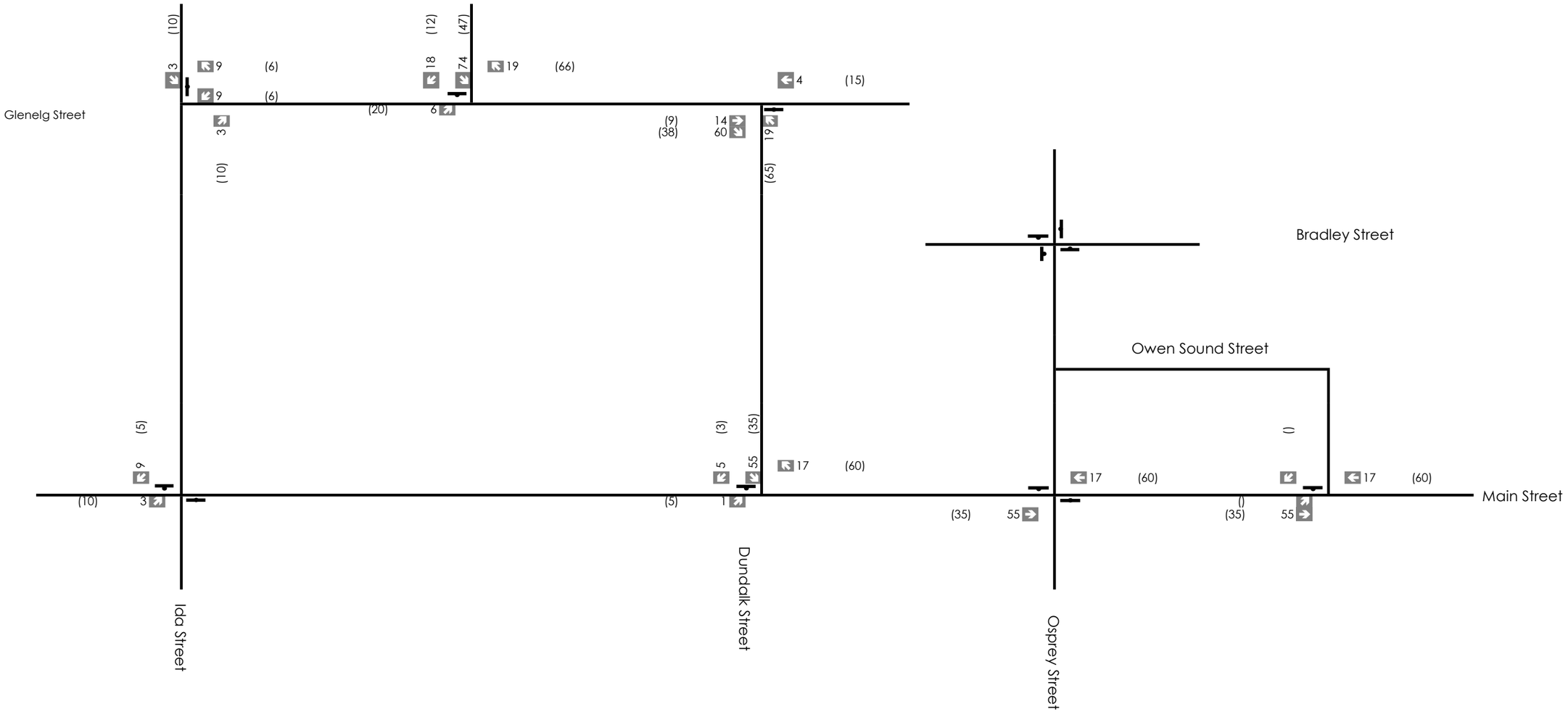
CROZIER CONSULTING ENGINEERS

**Figure 6**

Project No. 1060-6220

Date. 2022/08/31

Analyst. E.H.




**Legend**

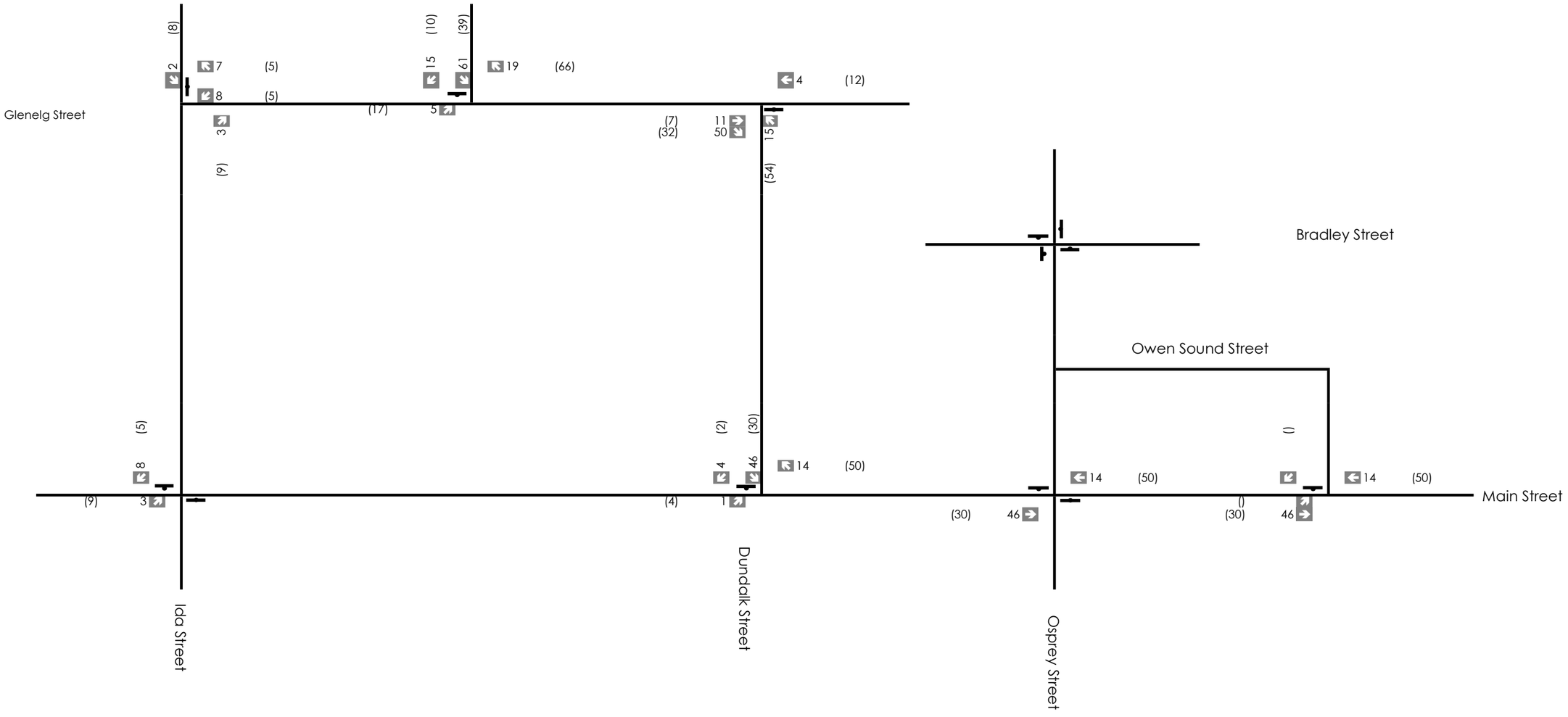
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Background Development: Glenelg Phase 1 Trip Assignment**

CROZIER CONSULTING ENGINEERS

**Figure 7**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




**Legend**

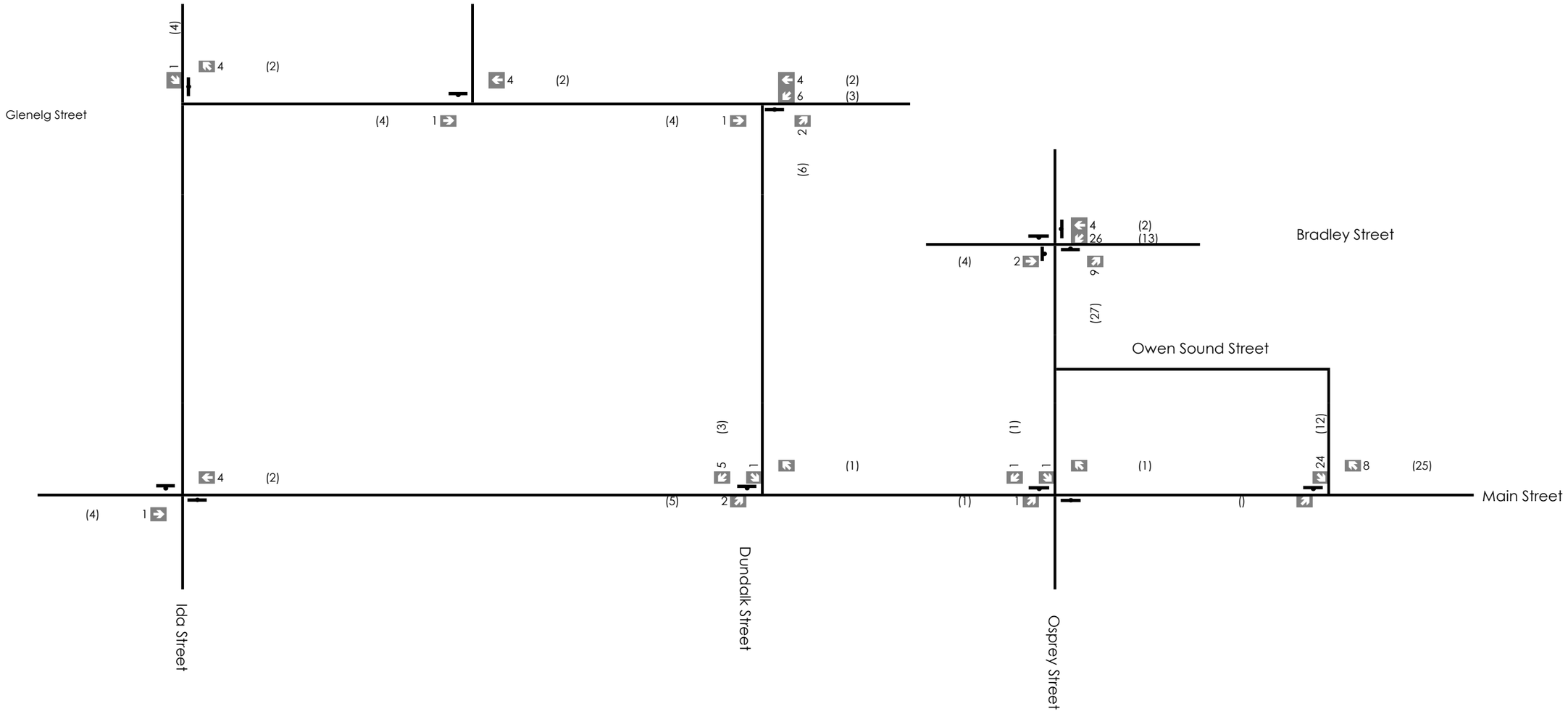
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Background Development: Glenelg Phase 2 Trip Assignment**

CROZIER CONSULTING ENGINEERS

**Figure 8**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




**Legend**

xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Background Development: White Rose Phase 3 Trip Assignment**

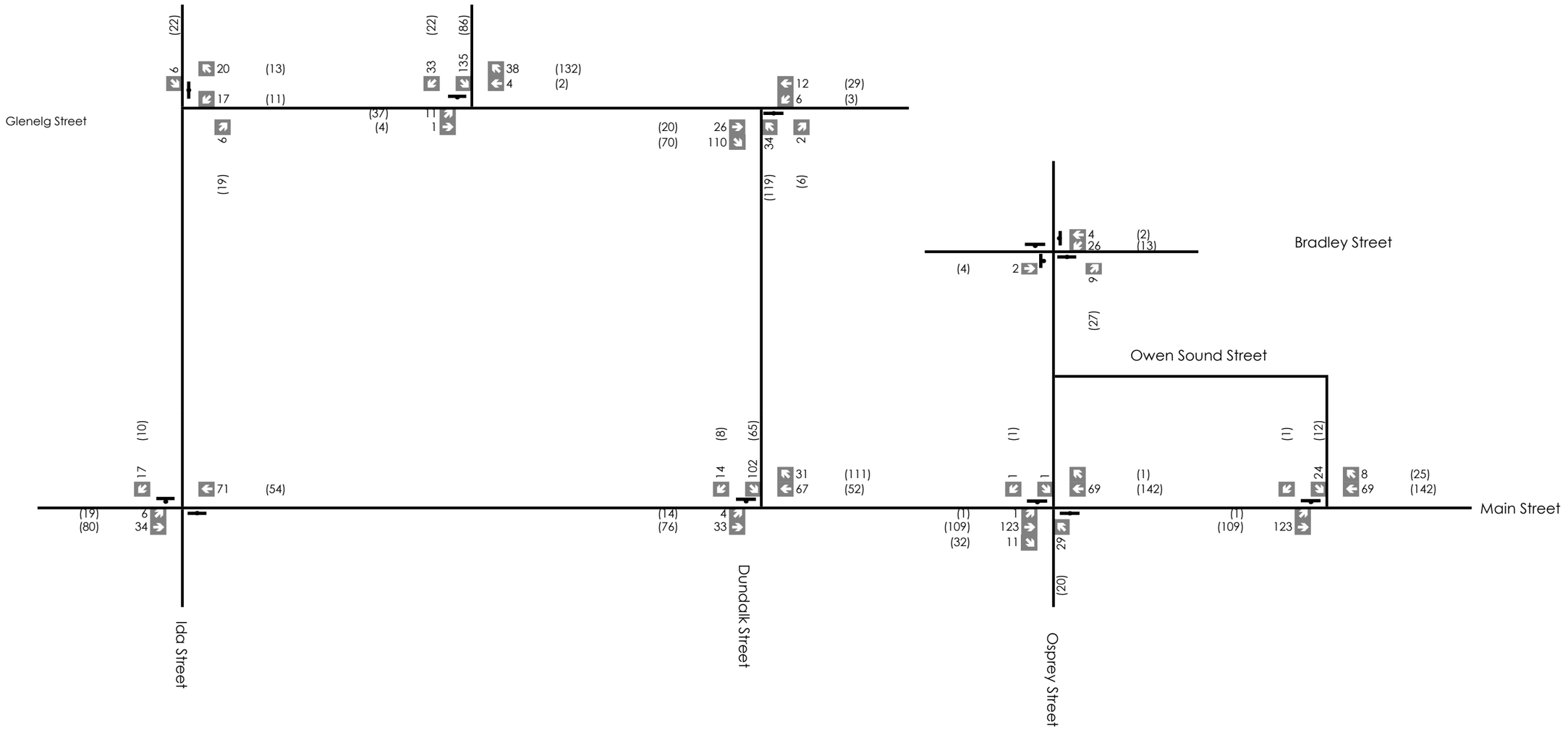
CROZIER CONSULTING ENGINEERS

**Figure 9**

Project No. 1060-6220

Date. 2022/08/31

Analyst. E.H.




**Legend**

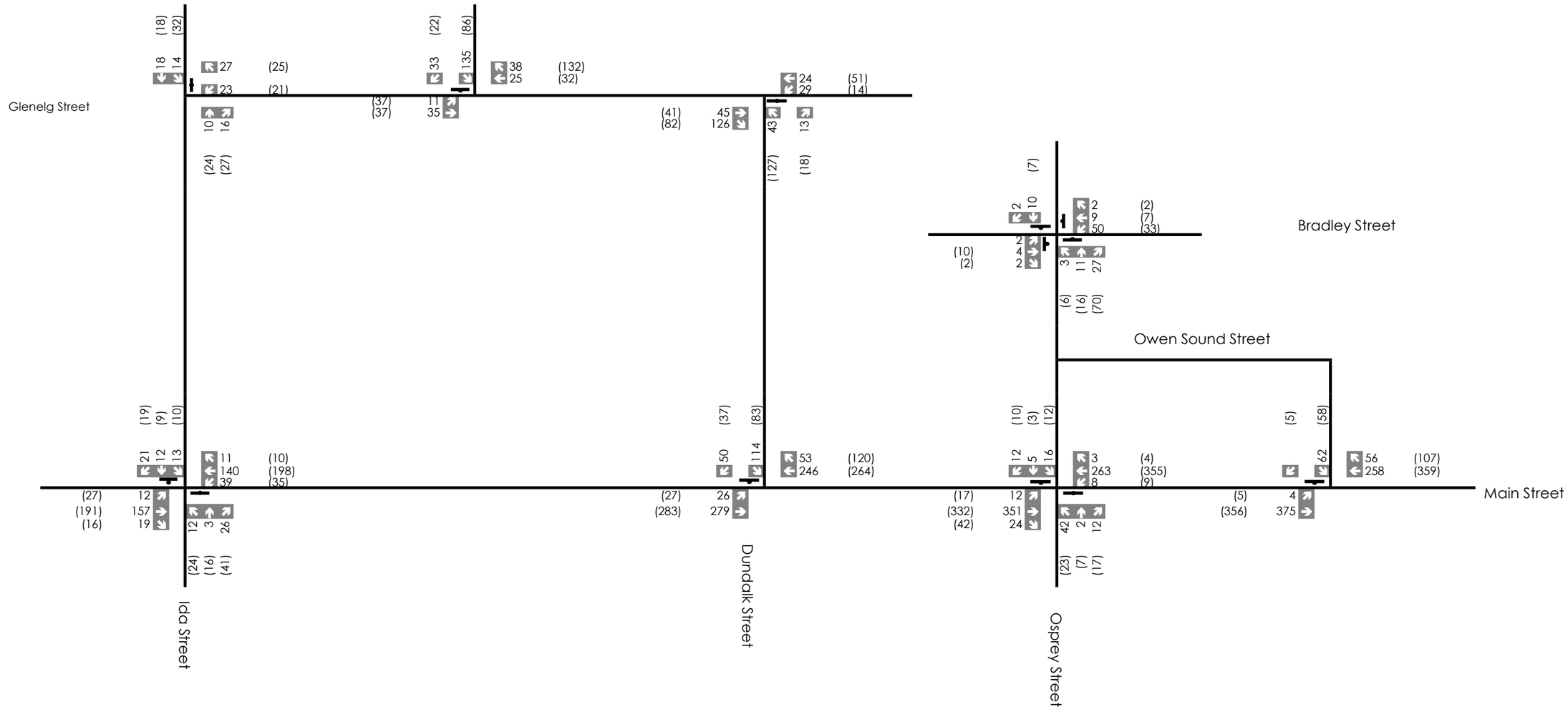
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Background Development Total Trip Assignment**

CROZIER CONSULTING ENGINEERS

**Figure 10**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




**Legend**

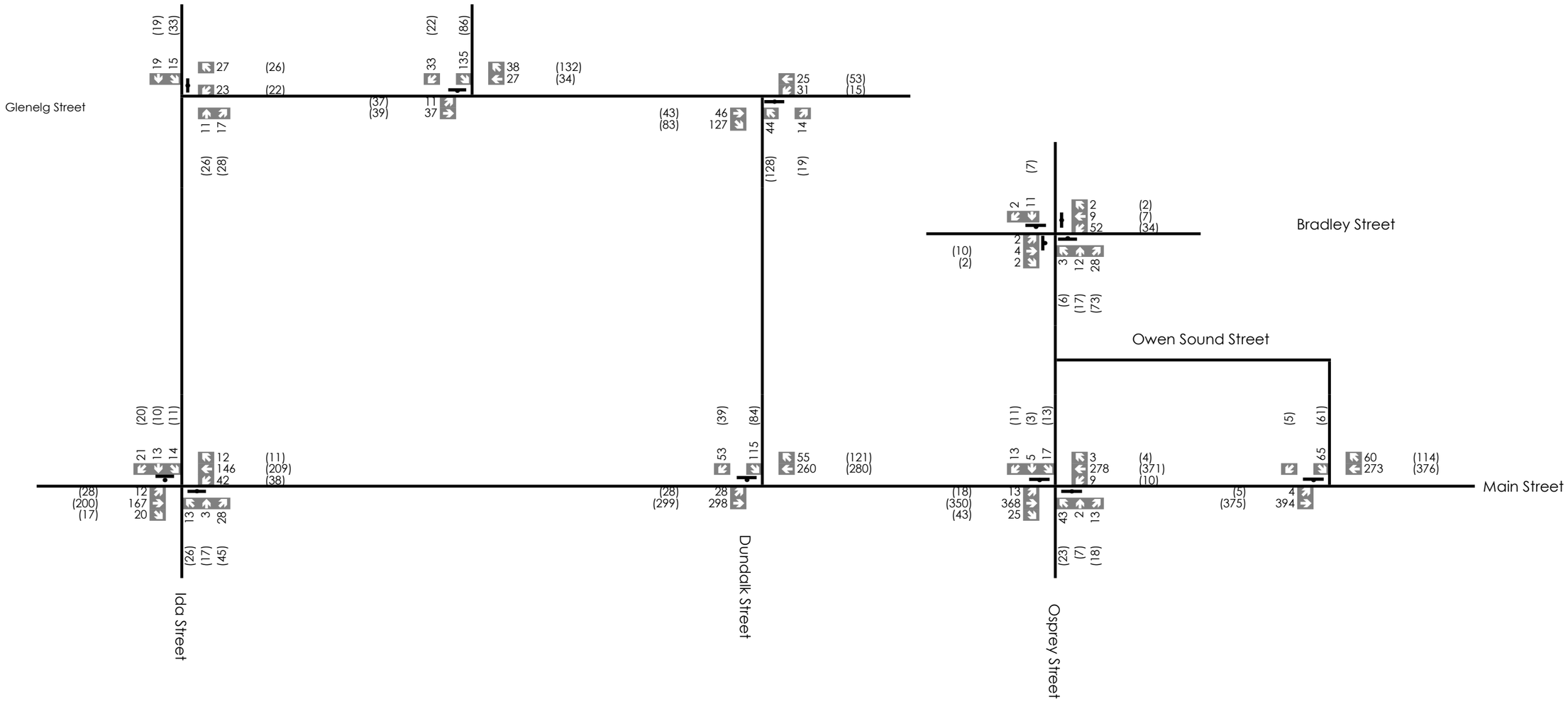
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Future Background 2027 Traffic Volumes**

CROZIER CONSULTING ENGINEERS

**Figure 11**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




**Legend**

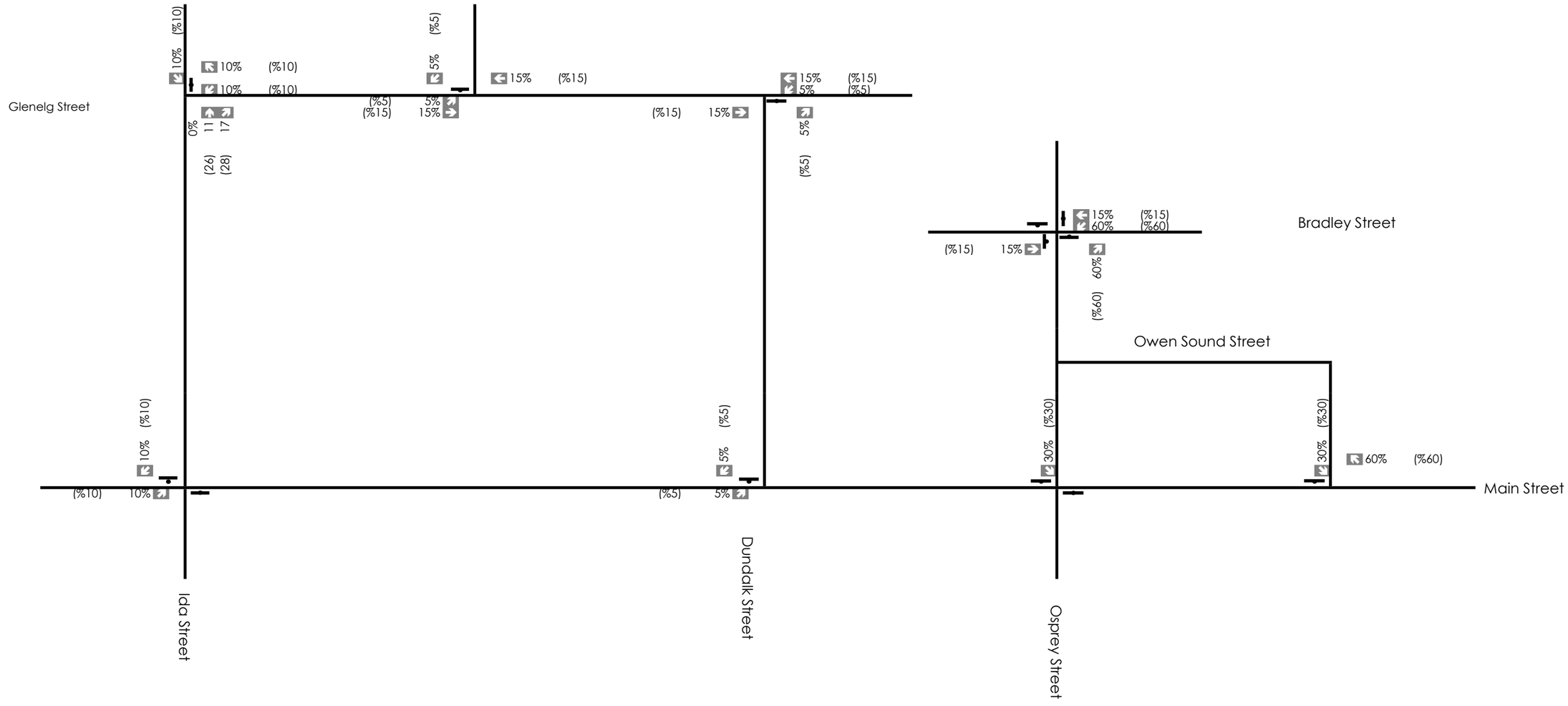
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Future Background 2032 Traffic Volumes**

CROZIER CONSULTING ENGINEERS

**Figure 12**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




**Legend**

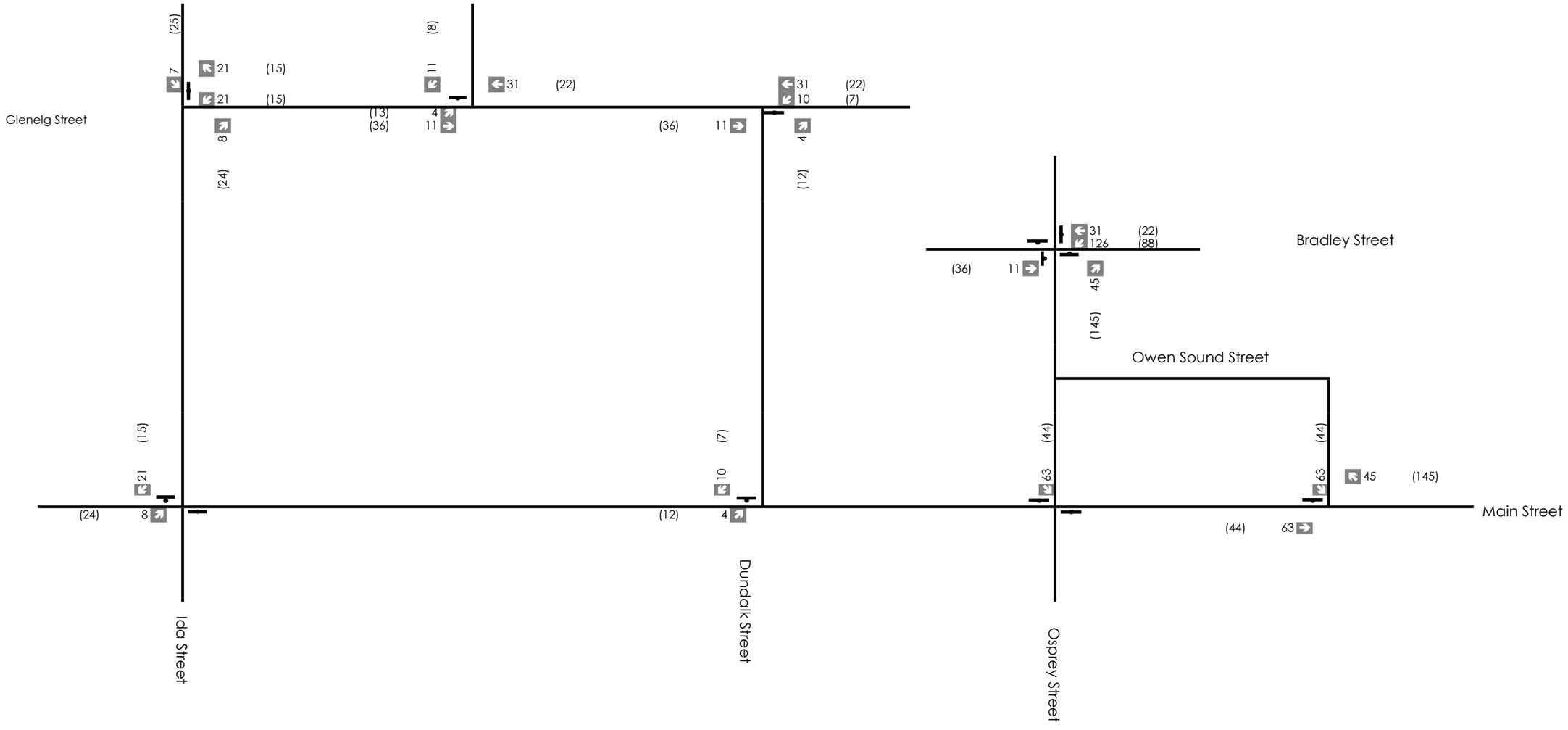
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Site Trip Distribution**

CROZIER CONSULTING ENGINEERS

**Figure 13**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




**Legend**

xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Site Trip Assignment**

CROZIER CONSULTING ENGINEERS

**Figure 14**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.


| Legend | Glenelg Phase 3 | CROZIER CONSULTING ENGINEERS | Figure 15 |
|---|---|---|---|
| xx A.M. Peak Hour Traffic Volumes<br>(XX) P.M. Peak Hour Traffic Volumes<br>Stop Sign | Future Total 2027 Traffic Volumes | | Project No. 1060-6220<br>Date. 2022/08/31<br>Analyst. E.H. |


**Legend**

xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Future Total 2032 Traffic Volumes**

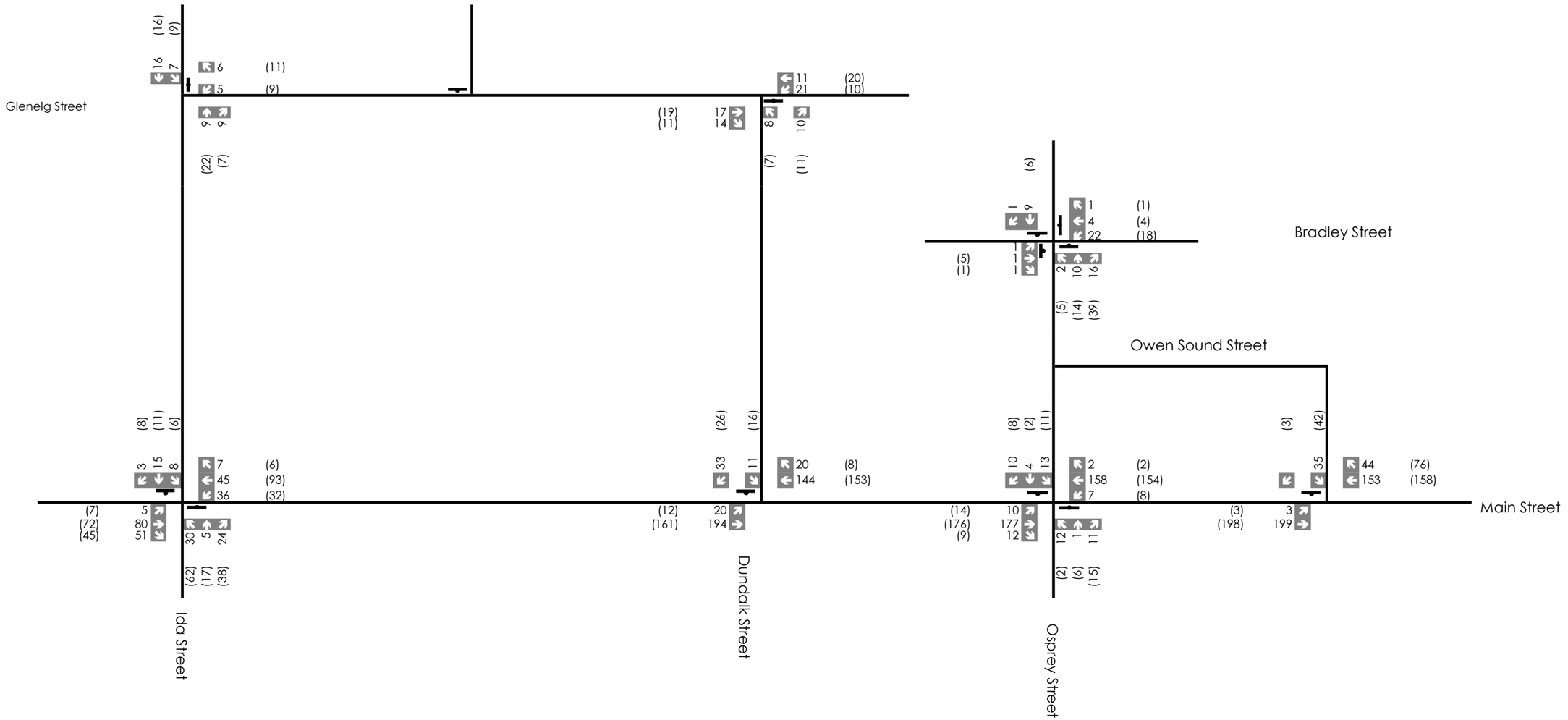
CROZIER CONSULTING ENGINEERS

**Figure 16**

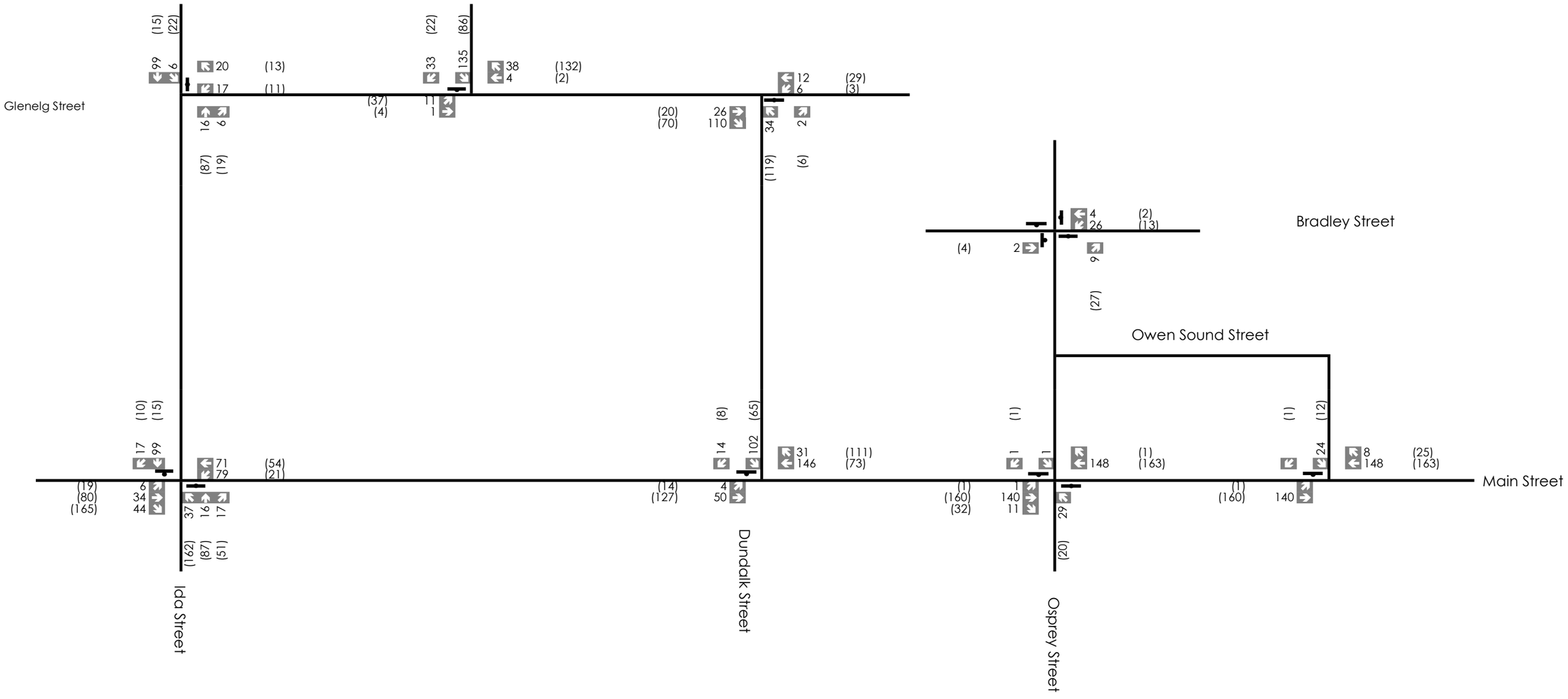
Project No. 1060-6220

Date. 2022/08/31

Analyst. E.H.




| Legend | Glenelg Phase 3 | CROZIER CONSULTING ENGINEERS | Figure 17 |
|---|---|---|---|
| xx A.M. Peak Hour Traffic Volumes<br>(XX) P.M. Peak Hour Traffic Volumes<br>Stop Sign | Eco Parkway Scenario Adjusted Existing Total Traffic Volumes | | Project No. 1060-6220<br>Date. 2022/08/31<br>Analyst. E.H. |




**Legend**

xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Eco Parkway Industrial Lands Trip Assignment**

CROZIER CONSULTING ENGINEERS

**Figure 18**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.


**Legend**

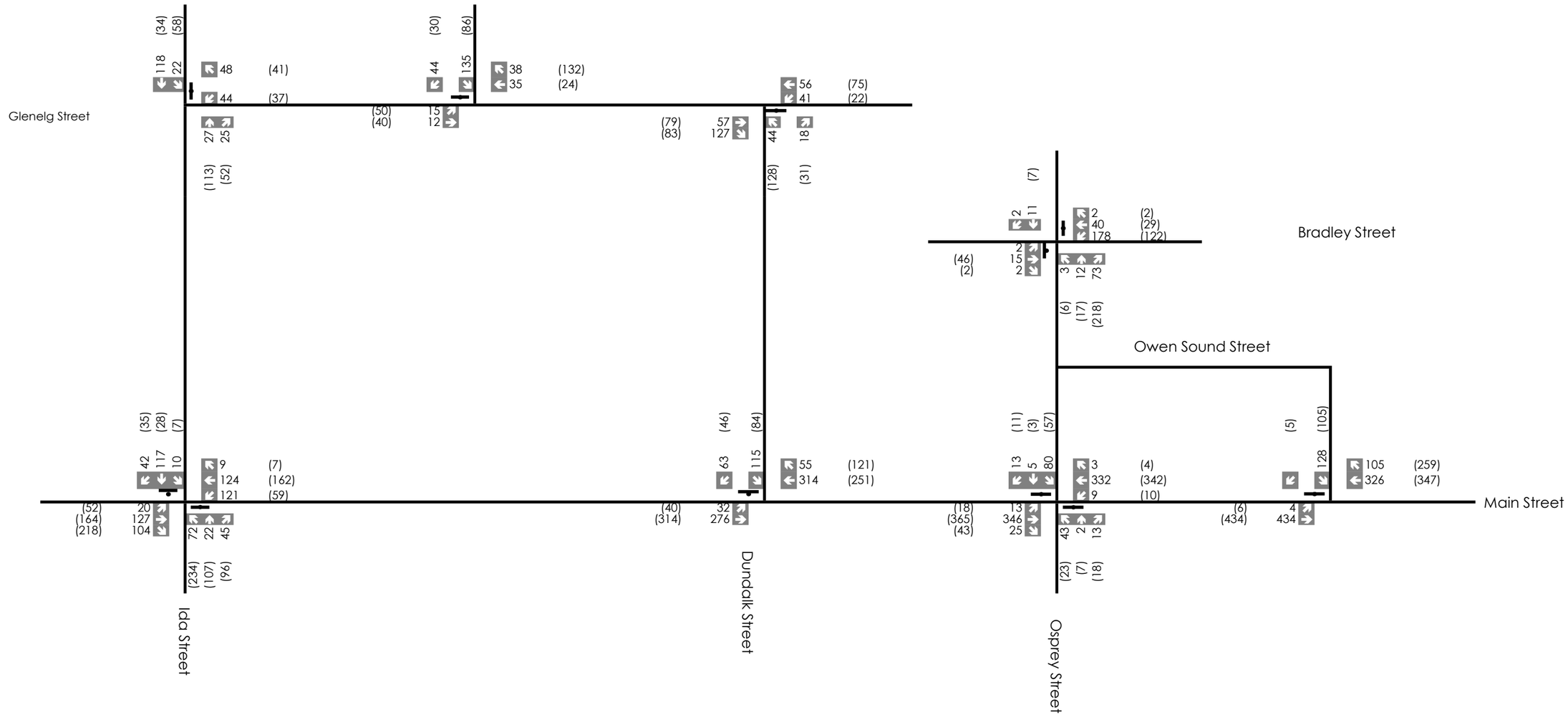
xx A.M. Peak Hour Traffic Volumes
(XX) P.M. Peak Hour Traffic Volumes
Stop Sign

**Glenelg Phase 3**

**Eco Parkway Scenario Future Background 2032 Traffic Volumes**

CROZIER CONSULTING ENGINEERS

**Figure 19**
Project No. 1060-6220
Date. 2022/08/31
Analyst. E.H.




| Legend | Glenelg Phase 3 | CROZIER CONSULTING ENGINEERS | Figure 20 |
|---|---|---|---|
| xx A.M. Peak Hour Traffic Volumes<br>(XX) P.M. Peak Hour Traffic Volumes<br>Stop Sign | Eco Parkway Scenario Future Total 2032 Traffic Volumes | | Project No. 1060-6220<br>Date. 2022/08/31<br>Analyst. E.H. |